Pioneer sound.vision.soul

Service Manual

ORDER NO.
ARP3390

PLASMA DISPLAY

PRO-FHD1

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PRO-FHD1	KUC	AC 120 V	

● This service manual should be used together with the following manual(s):

Model	Order No.	Remarks
PDP-5000EX/TYV5	ARP3344	

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T – ZZV JULY 2006 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56×10^1 → 561 .... RD1/4PU $\boxed{5}\boxed{6}\boxed{1}$ J
47k Ω → 47×10^3 → 473 .... RD1/4PU $\boxed{4}\boxed{7}\boxed{3}$ J
0.5 Ω → R50 .... RN2H $\boxed{R}\boxed{5}\boxed{0}$ K
1 Ω → 1R0 .... RS1P $\boxed{1}\boxed{R}\boxed{0}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562×10^1 → 5621 .... RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

■ CONTRAST TABLE

PRO-FHD1/KUC and PDP-5000EX/TYV5 are constructed the same except for the following:

Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			PDP-5000EX/TYV5	PRO-FHD1/KUC	
		PACKING SECTION			
P11- 1	⚠	Power Cord	ADG1214	ADG1215	
P11- 3		Remote Control Unit	AXD1535	AXD1534	
P11- 7		Ferrite Core	ATX1039	Not used	
P11- 8		Operating Instructions E (6L) (English,French,Italian,German,Dutch,Spanish)	ARE1424	Not used	
P11- 8		Operating Instructions U(3L) (English,French,Spanish)	Not used	ARE1425	
P11-12	NSP	Warranty	ARY1114	ARY1134	
P11-15		Vinyl Bag	AHG1337	Not used	
	NSP	Card	Not used	VRY1132	
P11-22		Upper Carton	AHD3476	AHD3477	
P11-25		WEEE Label L	AAX3271	Not used	
		EXTERIOR SECTION			
P13-12	NSP	Name Label	AAL2761	AAL2760	
		FRONT SECTION			
P15- 3		Front Case Assy (50F)	AMB2902	Not used	
P15- 3	NSP	Front Case Assy (50FEL)	Not used	AMB2910	
P15- 4		Badge	AAM1098	Not used	
P15- 4		Elite Badge	Not used	AAM1108	

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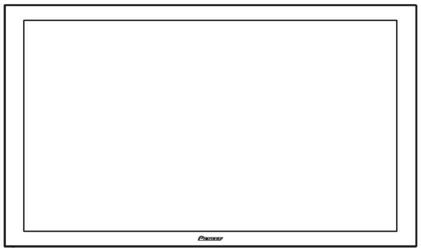
Service Manual



PDP-5000EX

ORDER NO.
ARP3344

PLASMA DISPLAY

PDP-5000EX

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-5000EX	TYV5	AC 110 to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-5000EX/TYV5	ARP3345	SCHEMATIC DIAGRAM, PCB CONNECTION DIAGRAM

For details, refer to "Important symbols for good services".

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1. NOTES ON SERVICE VISIT

1.1 SAFETY INFORMATION

❗

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols ▬ (fast operating fuse) and/or ▬ (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible ▬ (fusible de type rapide) et/ou ▬ (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

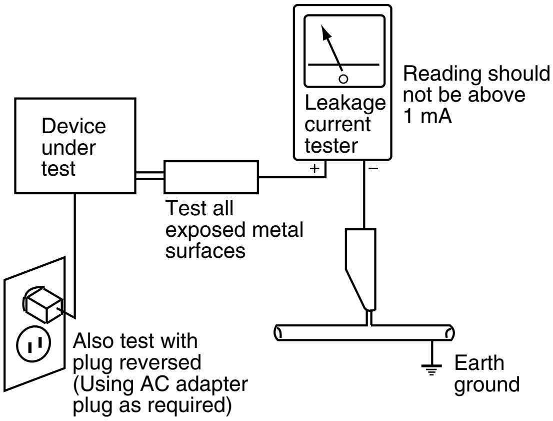
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 4 MΩ.
The below 4MΩ resistor value indicate an abnormality which require corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 1mA.


Device under test
Leakage current tester
Reading should not be above 1 mA
+
−
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the PANEL POWER SUPPLY Unit and MR POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the PANEL POWER SUPPLY Unit and MR POWER SUPPLY Unit)
6. Other primary side of the PANEL POWER SUPPLY Unit and MR POWER SUPPLY Unit

High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

If the procedures described in “10.2 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM” are performed before the power is turned off, the voltage will be discharged in about 1 minutes.

1. POWER SUPPLY Unit	(205 V)
2. 50FHD X DRIVE Assy	(–180 V to 205 V)
3. 50 FHD Y DRIVE Assy	(–60 V to 500 V)
4. 50FHD SCAN A Assy	(–60 V to 500 V)
5. 50FHD SCAN B Assy	(–60 V to 500 V)

▨: Part is Charged Section.

☐: Part is the High Voltage Generating Points other than the Charged Section.

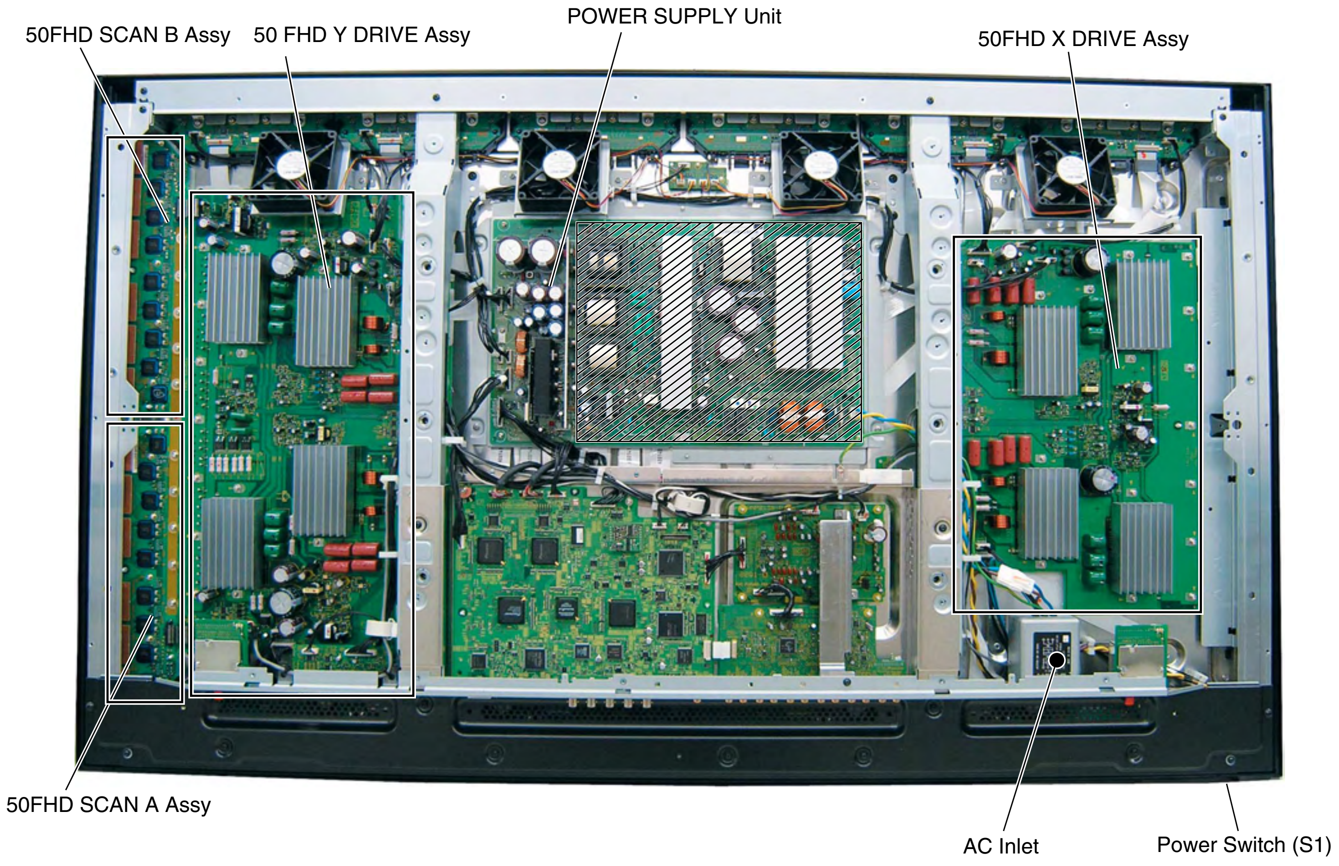


Fig.2 Charged Section and High Voltage Generating Point (Rear View)

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

1.2 QUICK REFERENCE UPON SERVICE VISIT

PDP-5000EX Quick Reference upon Service Visit ①
Notes, PD/SD diagnosis, and methods for various settings

Notes when visiting for service

1. Notes when disassembling/reassembling

① **Rear case**
When reassembling the rear case, the screws must be tightened in a specific order. Be careful not to tighten them in the wrong order forcibly. For details, see "Rear Case" in "6. DISASSEMBLY"

② **Attaching screws for the HDMI connector**
When attaching the HDMI connector after replacing the Main Assy, secure the HDMI connector manually with a screwdriver, but not with an electric screwdriver. If you tighten the screws too tightly with an electric screwdriver, the screw heads may be damaged, in which case the screws cannot be untightened/tightened any more.

2. On parts replacement

① **How to discharge before replacing the Assys**
A charge of significant voltage remains in the Plasma Panel even after the power is turned off. Safely discharge the panel before replacement of parts, in either manner indicated below:
A: Let the panel sit at least for 3 minutes after the power is turned off.
B: Turn the Large Signal System off before the power is turned off then, after 1 minute, turn the power off.
For details, see "10.2 Power ON/OFF Function for the Large-Signal System."

② **On the settings after replacement of the Assys**
Some boards need settings made after replacement of the Assys. For details, see "7. ADJUSTMENT"

3. On various settings

① **SR+**
After a repair using a PC, be sure to restore the setting for the RS-232C connector to SR+.

② **Setting in Factory mode**
After a Mask indication into the panel is performed, be sure to set the Mask setting to "OFF" then exit Factory mode.

PD/SD

	Item	No. of LEDs flashing Red	No. of LEDs flashing Blue
Panel section	Communication with the panel drive IC		Blue 1
	Communication with the module IIC		Blue 2
	DIGTAL-RST2		Blue 3
	Panel high temperature		Blue 4
Main section	Audio		Blue 5
	Communication with the Module microcomputer		Blue 6
	Main 3-wire serial communication		Blue 7
	Main IIC communication		Blue 8
	Communication with the Main microcomputer		Blue 9
	FAN		Blue 10
	Unit high temperature		Blue 11
	No corresponding item		Blue 12
	MTB-RST2/RST4		Blue 13
POWER		Red 2	
SCAN		Red 3	
SCN-5V		Red 4	
Y-DRIVE		Red 5	
Y-DCDC		Red 6	
Y-SUS		Red 7	
ADRS		Red 8	
X-DRIVE		Red 9	
X-DCDC		Red 10	
X-SUS		Red 11	
UNKNOWN		Red 15	

Change of settings

How to enter Factory mode using the supplied remote control unit

In the same way as with the remote control unit supplied with the 6th-generation model

How to switch UART ① (Main menu)

① Start up the unit by pressing [STANDBY/ON].
② Press [HOME MENU].
③ Select "Initial Setting" using [⬇], then press [ENTER].
④ Select "SR+", using [⬇].
⑤ Select "NO", using [⬅] or [➡].
(The baud rate is 9600 bps.)

How to switch UART ② (During Standby)

① Enter Standby mode.
② Hold [Volume +] or [-] pressed for 3 seconds.
③ Hold [SPLIT] pressed for 3 seconds.
④-1 To set to 232C, press [ENTER].
⑤-2 To set to SR+, press [HOME MENU].

Note: If switching is completed successfully, the red LED will flash twice.
Note 1: Use a remote control unit supplied with the 6th-generation models or later.
Note 2: Do not hold a key pressed for more than 5 seconds.

How to locate several items on the Factory menu

{ } : Item on the Factory menu
[ ] : Key on the remote control unit
" " : Screen indication

1. Confirmation of accumulated power-on time and power-on count
Select {INFORMATION} then {HOUR METER}.
(After entering Factory mode, press [⬇] three times.)

2. Confirmation of the Power-down and Shutdown histories

① **Panel system**
PD: Select {PANEL FACTORY} then {POWER DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER], then press [⬇] three times.)
SD: Select {PANEL FACTORY} then {SHUT DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER], then press [⬇] four times.)

② **Main Assy**
Select {INFORMATION} then {MAIN NG}.
(After entering Factory mode, press [⬇] once.)

3. How to display the Mask indication

① **Mask indication in the panel side**
1. Select {PANEL FACTORY} then {RASTER MASK SETUP}.
(After entering Factory mode, press [MUTING] once, press [ENTER], then press [⬇] 8 times.)
2. Press [ENTER], then select a Mask indication, using [⬆] or [⬇].

② **Mask (SG screen) indication in the Main Assy (MAIN VDEC)**
1. Select either Input 5 or 6, to which no signal is input (black screen).
2. Select {INITIALIZE} then {SG MODE}. Press [⬅]. (After entering Factory mode, press [MUTING] twice, then press [⬇] once.)
Then, the indication at the lower right of the screen changes from "OFF" to "ANA AD YCBCR".
3. You can change Mask patterns by pressing [⬇] to select {SG PATTERN} then using [⬅] or [➡].
Note: When you switch "SG MODE" routes, some displays become monochrome, as they are in Y-signal only mode.

Adjustments and Settings after replacement of the Assys (Procedures in Factory mode)

1. Digital Video Assy: Transfer of backup data
① Select {PANEL FACTORY}, {ETC}, then {BACKUP DATA}. (After entering Factory mode, press [MUTING] once, press [ENTER], press [⬇] seven times, then press [ENTER].)
② Select {TRANSFER}, using [➡], then hold [ENTER] pressed for at least 5 seconds.
③ After transfer of backup data is completed, {ETC} is automatically selected, and the LED on the front panel returns to normal lighting.

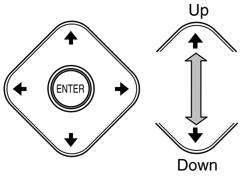
2. MAIN Assy: Execution of FINAL SETUP.
① Select {INITIALIZE} then {FINAL SETUP}, then press [ENTER]. (After entering Factory mode, press [MUTING] twice, then press [⬇] four times.)
② With a North American model, select "YES US", and with a European model, select "YES EU". Then hold [ENTER] pressed for at least 5 seconds.
③ After "FINAL SETUP IS COMPLETE" is displayed on the screen, enter Standby mode.
④ Press [HOME MENU] then, within 3 seconds, press [STANDBY].
⑤ After the Integrator menu is displayed, select {ORBITER MODE} by pressing [⬇] twice.
⑥ Select "ON" for {ORBITER MODE}, using [➡].
⑦ Press [⬇] once to select {MASK CONTROL}.
⑧ Select "ON" for {MASK CONTROL}, using [➡].
⑨ Press [HOME MENU] to exit Integrator mode.

3. POWER SUPPLY Unit: Clearance of the accumulated power-on count and maximum temperature value
① Select {PANEL FACTORY}, {ETC}, then {P COUNT INFO}. (After entering Factory mode, press [MUTING] once, press [ENTER], press [⬇] seven times, press [ENTER], then press [⬇] six times.)
② Press [➡] to select "CLEAR". Hold [ENTER] pressed for at least 5 seconds.
After clearance is completed, "ETC" is automatically selected. Clear the maximum temperature value (MAX TEMP) in the same manner.

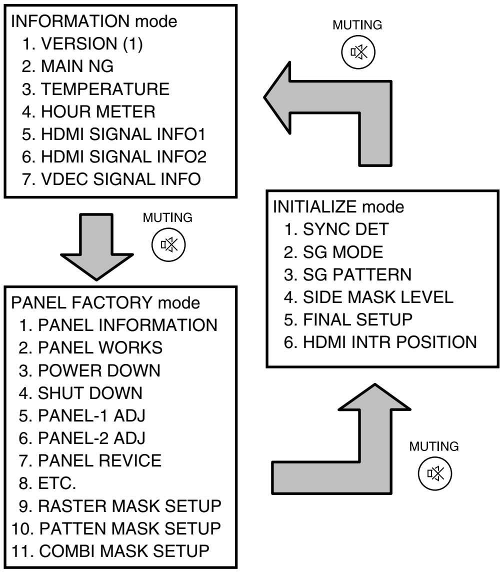
4. Other Assys: Clearance of the maximum temperature value
① Select {PANEL FACTORY}, {ETC}, then {MAX TEMP}. (After entering Factory mode, press [MUTING] once, press [ENTER], press [⬇] seven times, press [ENTER], then press [⬇] seven times.)
② Press [➡] to select "CLEAR". Hold [ENTER] pressed for at least 5 seconds.
After clearance is completed, "ETC" is automatically selected.

PDP-5000EX Quick Reference upon Service Visit ②
Mode transition and structure of layers in Service Factory mode

Mode transition in Service Factory mode



- To shift to another mode, press [MUTING].
- To shift to another item in a specific mode, press [⬆] or [⬇].
- To shift to the next nested layer below for an item with a "(+)" indication, press [ENTER]. To return to the next nested layer above, also press [ENTER].



INFORMATION mode
1. VERSION (1)
2. MAIN NG
3. TEMPERATURE
4. HOUR METER
5. HDMI SIGNAL INFO1
6. HDMI SIGNAL INFO2
7. VDEC SIGNAL INFO

PANEL FACTORY mode
1. PANEL INFORMATION
2. PANEL WORKS
3. POWER DOWN
4. SHUT DOWN
5. PANEL-1 ADJ
6. PANEL-2 ADJ
7. PANEL REVICE
8. ETC.
9. RASTER MASK SETUP
10. PATTEN MASK SETUP
11. COMBI MASK SETUP

INITIALIZE mode
1. SYNC DET
2. SG MODE
3. SG PATTERN
4. SIDE MASK LEVEL
5. FINAL SETUP
6. HDMI INTR POSITION

Structure of Layers in Service Factory Mode

INFORMATION mode	
1. VERSION (1)	Version indications for the main system and panel system
2. MAIN NG	Shutdown history for the main system (To shift to the CLEAR layer, press [SET].)
2-1.CLEAR	To clear data, select "YES", using [⬅] or [➡], then hold [SET] pressed for several seconds.
3. TEMPERATURE	Indications of converted temperature values for temperature sensors 1 and 2 and fan operation
4. HOUR METER	Indications of the accumulated power-on time and power-on count of the panel
5. HDMI SIGNAL INFO 1	Items for use by engineers
6. HDMI SIGNAL INFO 2	Indications of data such as HDMI signal judgment (For details, see the corresponding page.)
7. VDEC SIGNAL INFO	Items for use by engineers
PANEL FACTORY mode	See "Structure of Layers in Panel Factory Mode."
INITIALIZE	
1. SYNC DET (+)	Items for use by engineers
2. SG MODE	ON/OFF of the SG signal from the MAIN VDEC (composite input signal required)
3. SG PATTERN SG	Selection of the SG signal
4. SIDE MASK LEVEL (+)	Items for use by engineers
4-1. R MASK LEVEL	
4-2. G MASK LEVEL	
4-3. B MASK LEVEL	
5. FINAL SETUP	Factory-preset items (Setup must be executed after replacement of the Main Assy.)
5-1. DATA RESET	
6. HDMI INTER POSITION (+)	Items for use by engineers

Structure of Layers in Panel Factory Mode 1

1. PANEL INFORMATION	Version indication of the panel
2. PANEL WORKS	Indications of the accumulated power-on time, pulse-meter count, and power-on count of the panel
3. POWER DOWN	Indication of the Power-down history
4. SHUT DOWN	Indication of the Shutdown history
5. PANEL-1 ADJ (+)	
1. X-SUS B	Modification not required because these items are basically for factory presetting
2. Y-SUS B	
3. Y-SUSTAIL T1	
4. Y-SUSTAIL T2	
5. Y-SUSTAIL W	
6. XY-RST W1	
7. XY-RST W2	
8. VOL SUS	Settings required after replacement of the panel
9. VOL OFFSET	
10. VOL RST P	
11. SUS FREQ.	For AM noise prevention (Depending on the mode, brightness of the screen changes.)
6. PANEL-2 ADJ (+)	
1. R-HIGH	Parameters for the WB adjustment of the panel, which are required during adjustment after panel replacement
2. G-HIGH	
3 .B-HIGH	
4. R-LOW	
5. G-LOW	
6. B-LOW	
7. ABL	Setting of the power consumption. A setting table is available for each vertical signal.

To "Structure of Layers in Panel Factory Mode 2"

Structure of Layers in Panel Factory Mode 2

7. PANEL REVISE(+)	
R-LEVEL	Items for use by engineers
G-LEVEL	
B-LEVEL	
8. ETC(+)	
1. BACKUP DATA	For transferring backup data (after replacement of the DIGITAL Assy)
2. DIGITAL EEPROM	To clear data of the digital video
3. PD INFO.	For clearance of data for the corresponding items. The clearing method is the same: Select "CLEAR", using [➡], then hold [SET] pressed for at least 5 seconds. After clearance is completed, {ETC} is automatically selected.
4. SD INFO.	
5. HR-MTR INFO.	
6. PM/B1-B5	
7. P COUNT INFO.	
8. MAX TEMP.	
9. RASTER MASK SETUP (+)	
1. MASK OFF	For use while Raster Mask (full mask) is displayed. Use [⬆] or [⬇] to select the type of mask.
2. RST MASK 01	
• • • • •	
25. RST MASK 24	
10. PATTEN MASK SETUP (+)	
1. MASK OFF	For use while Pattern Mask is displayed. Use [⬆] or [⬇] to select the type of mask.
2. PTN MASK 01	
• • • • •	
40. PTN MASK 39	
11. COMBI MASK SETUP (+)	
1. MASK OFF	For use while Combination Mask is displayed. Use [⬆] or [⬇] to select the type of mask.
2. CMB MASK 01	
• • • • •	
11. CMB MASK 10	

1.3 JIGS LIST

■ Jigs list

Jig No.	Jig Name	Remarks
GGF1475	Communication jig	used for RS-232C command communication

■ Cleaning

Name	Part No.	Remarks
Cleaning liquid	GEM1004	Used to fan cleaning. Refer to "2.4 CHASSIS SECTION (1/2) ", "6. DISASSEMBLY: 2-4 Fan Motor".
Cleaning paper	GED-008	

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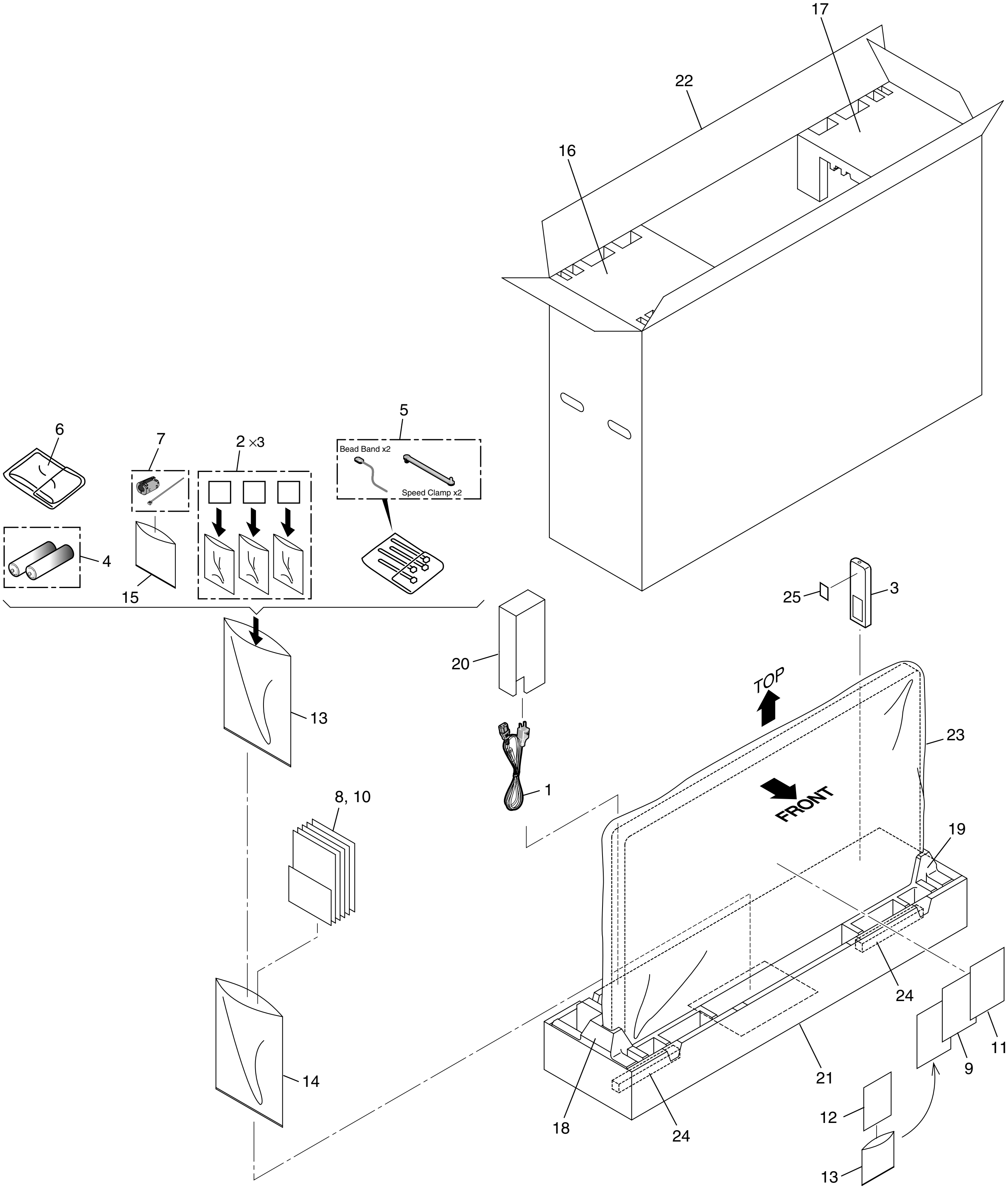
2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING SECTION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Bead Band x2
Speed Clamp x2
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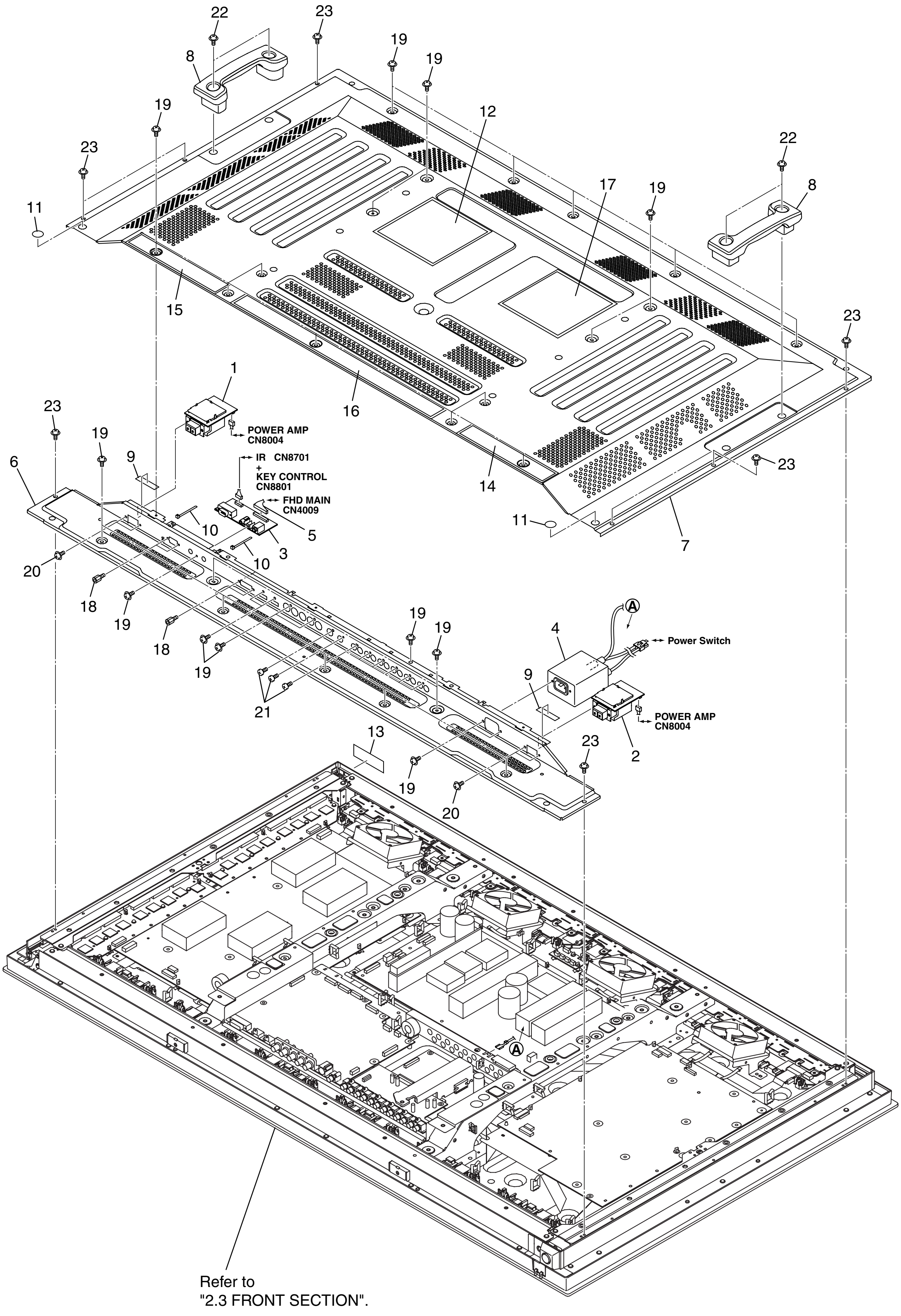
PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	Power Cord	ADG1214
	2	BNC Conversion Connector	AKX1052
	3	SR Remote Control Assy F (E)	AXD1535
NSP	4	Dry Cell Battery (R6P, AA)	VEM1031
	5	Binder Assy	AEC1758
	6	Wiping Cloth	AED1285
	7	Ferrite Core	ATX1039
	8	Operating Instructions (English /French/ German/ Italian/ Duch/ Spanish)	ARE1424
	9	Caution Sheet	ARM1232
	10	Wiping Cloth Caution (11L)	ARM1283
	11	Caution Sheet (7L)	ARM1309
NSP	12	Warranty	ARY1114
	13	Catalogue Bag	AHG1340
	14	Polyethylen Bag	AHG1336
	15	Polyethylen Bag	AHG1337
	16	Pad (50T-L)	AHA2546
	17	Pad (50T-R)	AHA2547
	18	Pad (50B-L)	AHA2548
	19	Pad (50B-R)	AHA2549
	20	Power Cord Case	AHC1073
	21	Under Carton (505)	AHD3326
	22	Upper Carton (50F_PE)	AHD3476
	23	Mirror Mat	AHG1284
	24	Protector	AHG1384
	25	WEEE Label L	AAX3271

2.2 EXTERIOR SECTION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POWER AMP
CN8004
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IR CN8701
+
KEY CONTROL
CN8801
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FHD MAIN
CN4009
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Power Switch
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POWER AMP
CN8004
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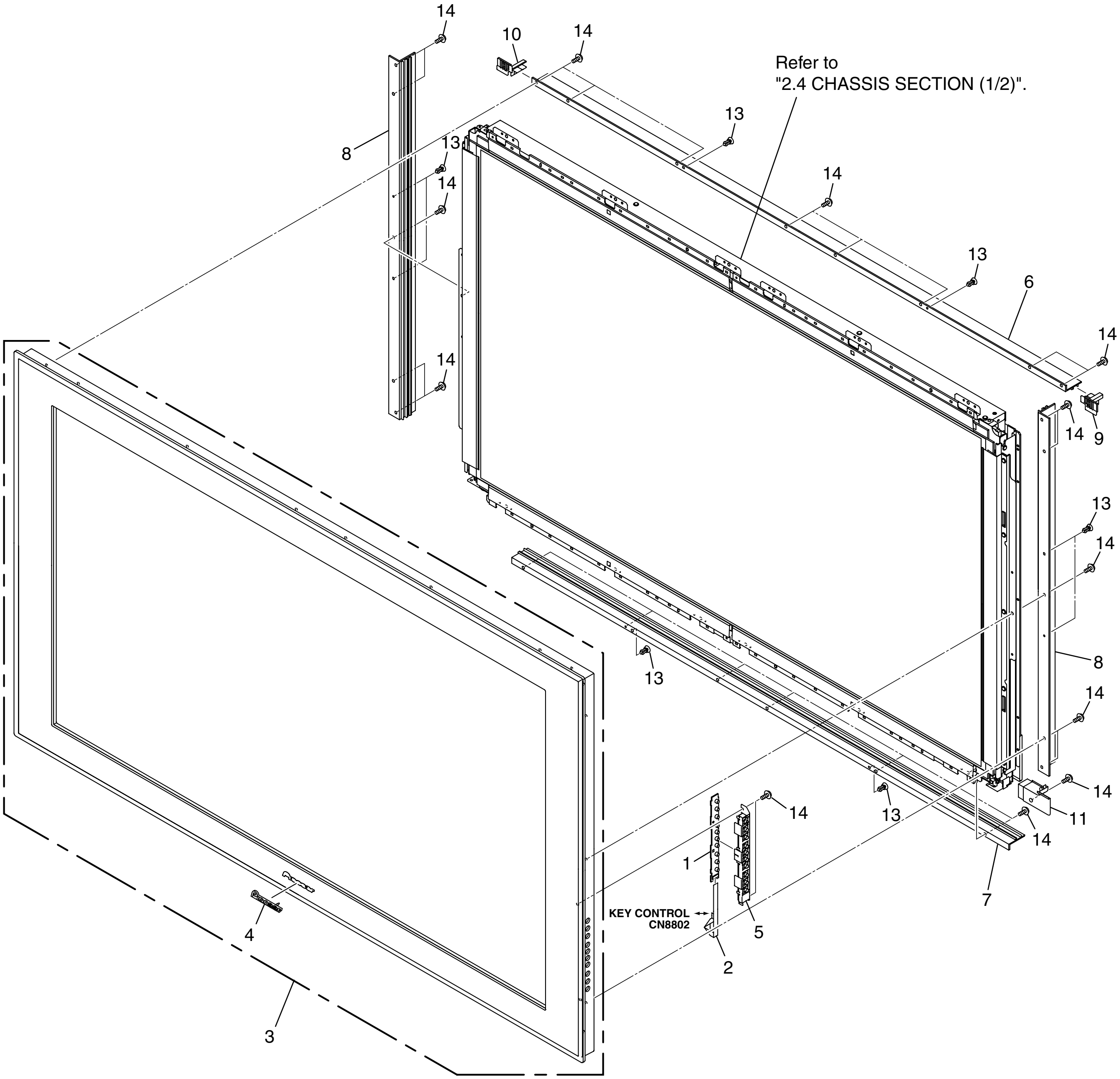
Refer to
"2.3 FRONT SECTION".

EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FHD SP LR1 Assy	AWW1119
	2	FHD SP LR2 Assy	AWW1120
	3	FHD RS232C+SR Assy	AWW1126
⚠	4	AC Inlet (CN1)	AKP1297
	5	14P Housing Wire (J119)	ADX3311
	6	Terminal Panel (F)	ANG2914
	7	Rear Case (F)	ANE1654
	8	Grip	AMR3380
	9	Gasket SP-T	ANK1750
	10	Binder	AEC-093
	11	Rear Corner Label (15)	AAX3081
NSP	12	Name Label (50FE)	AAL2761
	13	Serial Seal	AAX3143
	14	Terminal Display Label L (50FE)	AAX3320
	15	Terminal Display Label R (50FE)	AAX3321
	16	Terminal Display Label C (50FE)	AAX3322
	17	Caution Label (50F)	AAX3323
	18	Hexagon Head Screw	BBA1051
	19	Screw	AMZ30P060FTB
	20	Screw	APZ30P080FTB
	21	Screw	BPZ30P080FTB
	22	Screw	HMB50P140FTB
	23	Screw	TBZ40P080FTB

* 1. FHD SP LR1 Assy and 2. FHD SP LR2 Assy can be replaced.

2.3 FRONT SECTION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Refer to
"2.4 CHASSIS SECTION (1/2)".
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KEY CONTROL
CN8802
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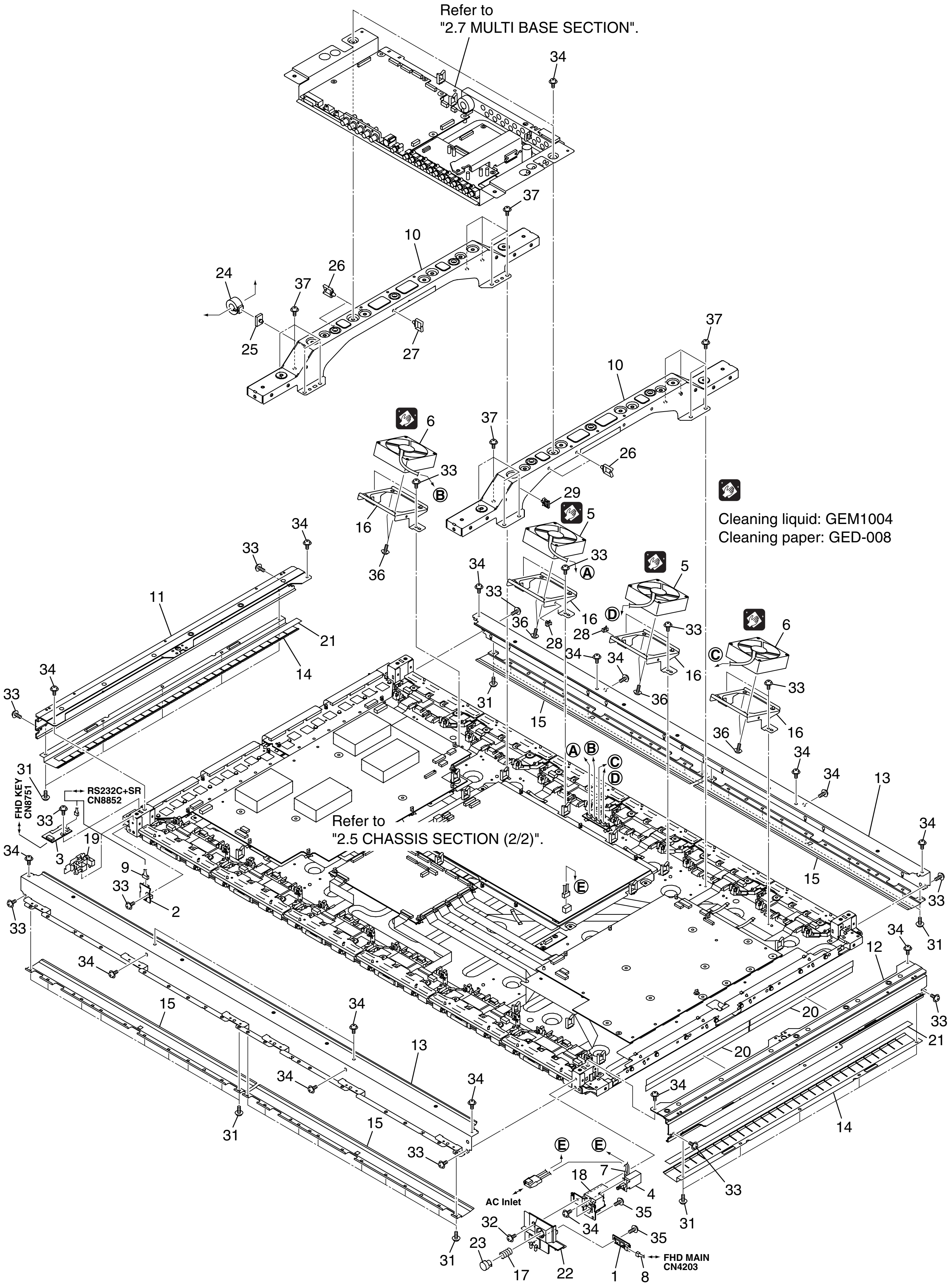
FRONT SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FHD KEY Assy	AWW1124
	2	Flexible Cable (J215)	ADD1414
	3	Front Case Assy (50F)	AMB2902
	4	Pioneer Name Plate	AAM1098
	5	Operation Button (50FHD)	AAC1561
	6	Sash T	AAK2883
	7	Sash B	AAK2884
	8	Sash S	AAK2885
	9	Corner Holder L	AAK2889
	10	Corner Holder R	AAK2890
	11	Corner Holder B	AAK2891
	12	• • • • •	
	13	Nyron Rivet	AEC2086
	14	Screw	APZ30P100FTB

2.4 CHASSIS SECTION (1/2)


Refer to
"2.7 MULTI BASE SECTION".
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RS232C+SR
CN8852
FHD KEY
CN8751
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Refer to
"2.5 CHASSIS SECTION (2/2)".
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AC Inlet
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FHD MAIN
CN4203
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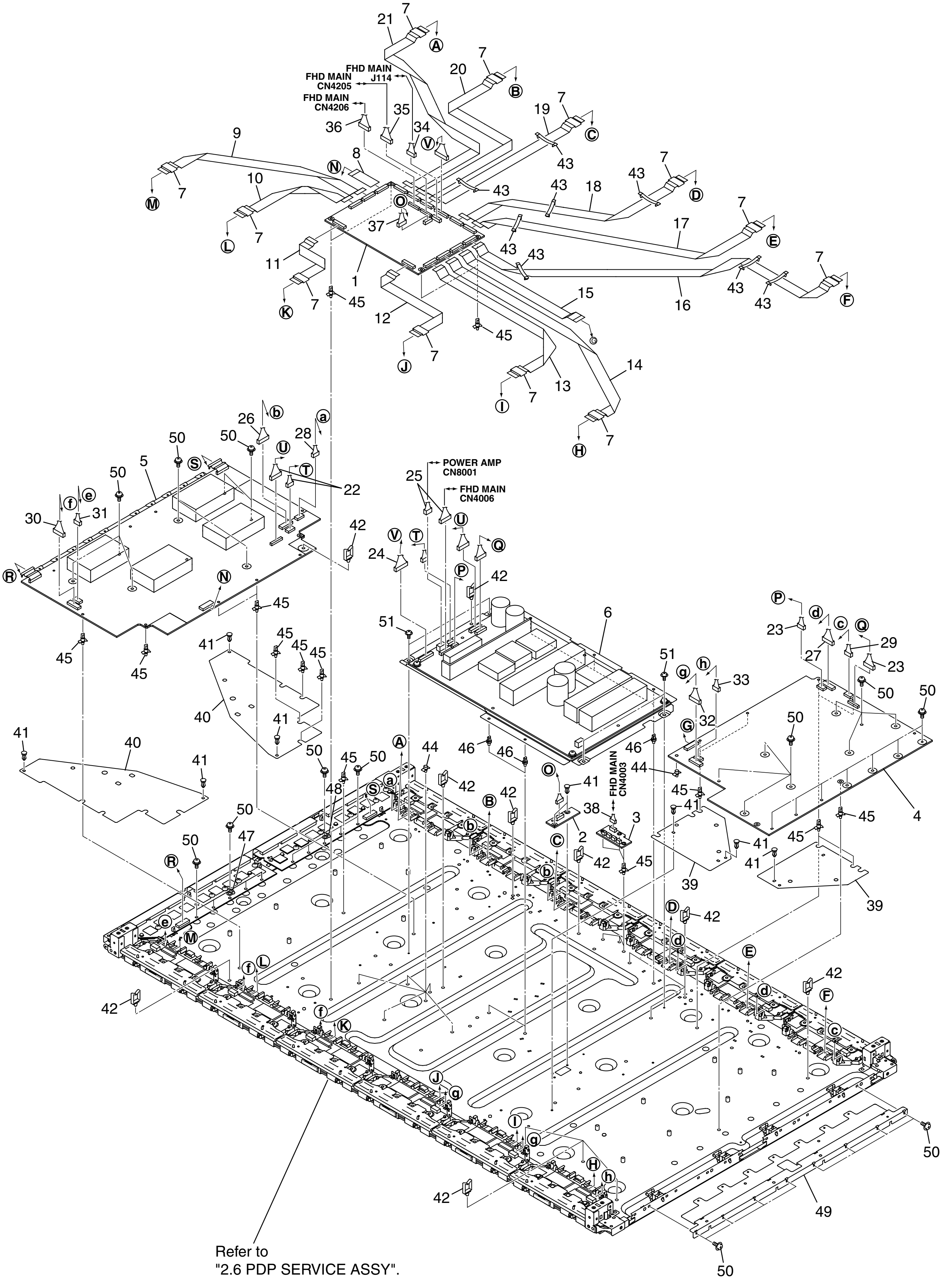
8

Cleaning liquid: GEM1004
Cleaning paper: GED-008

CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.
	1	FHD LED Assy	AWW1121
	2	FHD IR Assy	AWW1123
	3	FHD KEY CONTROL Assy	AWW1125
⚠	4	Power Switch (S1)	ASG1084
	5	Fan Motor 80 x 25L	AXM1055
	6	Fan Motor 80 x 25L	AXM1056
	7	Housing Wire (J103)	ADX3297
	8	3P Housing Wire (J121)	ADX3313
	9	6/4/3P Housing Wire (J124)	ADX3316
	10	Sub Frame (F)	ANA1937
	11	Front Chassis V Assy L	ANA1953
	12	Front Chassis V Assy R	ANA1954
	13	Front Chassis H Assy (F)	ANA1957
	14	Panel Holder V (50)	ANG2663
	15	Panel Holder H Assy (50)	ANG2678
	16	Fan Holder (F)	ANG2908
	17	Coil Spring	ABH1114
	18	SW Holder	AMR3544
	19	IR Holder	AMR3549
	20	Cover	AMR3639
	21	Gasket F	ANK1858
	22	Power Button Holder Assy	AAK2887
	23	Power Button	AAD4127
	24	Ferrite Core	ATX1044
	25	Ferrite Core Holder	AEC1818
	26	Wire Saddle	AEC1745
	27	Wire Saddle	AEC1797
	28	Mini Clamp	AEC2003
	29	Wire Saddle	AEC2031
	30	• • • • •	
	31	Screw	ABZ30P060FTC
	32	Screw	ABZ30P080FTB
	33	Screw	ABZ30P080FTC
	34	Screw	AMZ30P060FTB
	35	Screw	APZ30P060FTB
	36	Screw	PPZ50P100FTB
	37	Screw	TBZ40P080FTB

2.5 CHASSIS SECTION (2/2)


FHD MAIN CN4205
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FHD MAIN CN4206
POWER AMP CN8001
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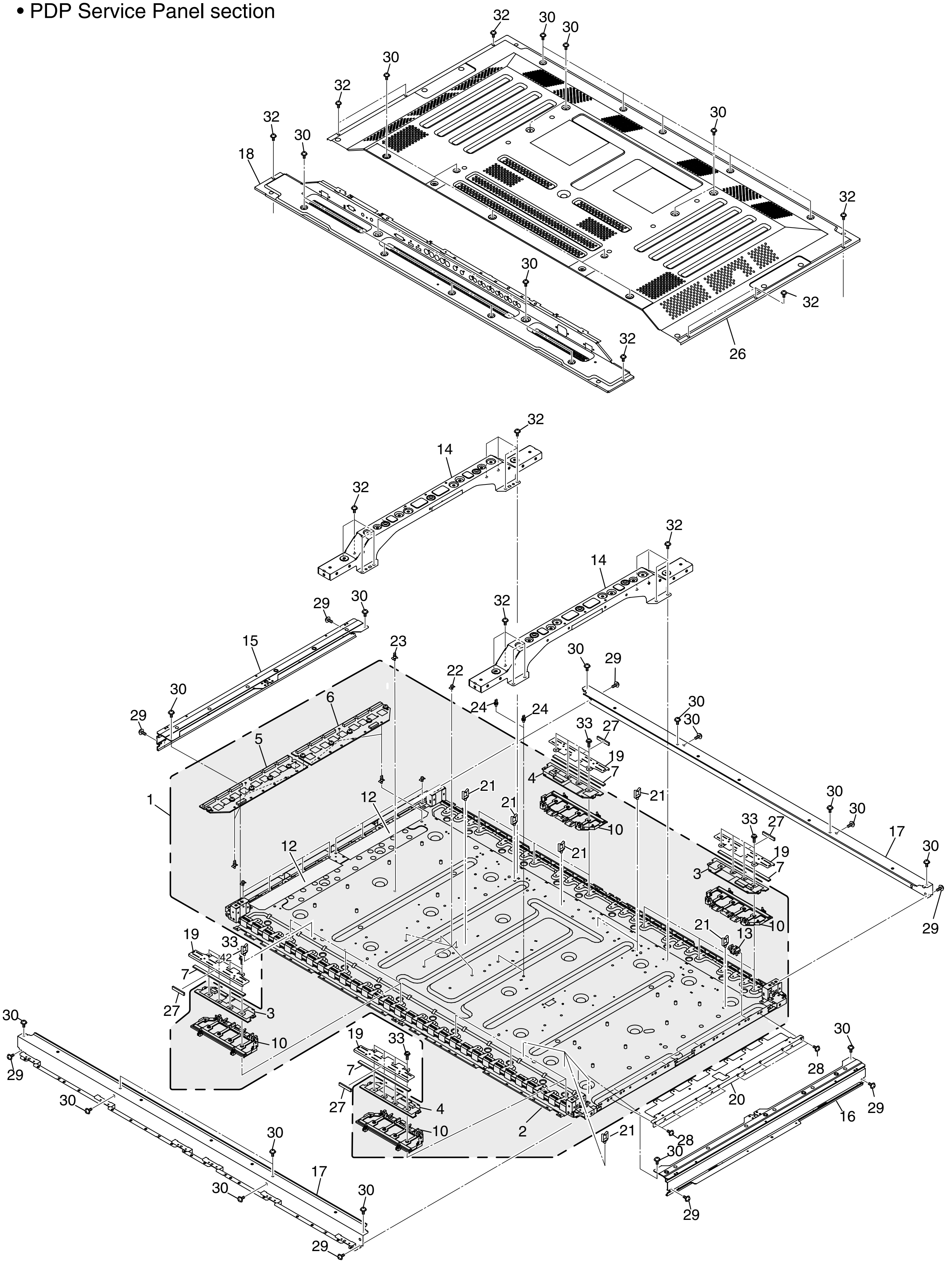
Refer to
"2.6 PDP SERVICE ASSY".

CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	FHD DIGITAL Assy	AWW1115
	2	FHD PANEL SENSOR Assy	AWW1116
	3	FHD FAN CONNECT Assy	AWW1122
	4	50FHD X DRIVE Assy	AWV2293
	5	50FHD Y DRIVE Assy	AWV2294
⚠	6	POWER SUPPLY Unit	AXY1148
	7	Ferrite Core	ATX1048
	8	Flexible Cable (J201)	ADD1400
	9	Flexible Cable (J202)	ADD1401
	10	Flexible Cable (J203)	ADD1402
	11	Flexible Cable (J204)	ADD1403
	12	Flexible Cable (J205)	ADD1404
	13	Flexible Cable (J206)	ADD1405
	14	Flexible Cable (J207)	ADD1406
	15	Flexible Cable (J208)	ADD1407
	16	Flexible Cable (J209)	ADD1408
	17	Flexible Cable (J210)	ADD1409
	18	Flexible Cable (J211)	ADD1410
	19	Flexible Cable (J212)	ADD1411
	20	Flexible Cable (J213)	ADD1412
	21	Flexible Cable (J214)	ADD1413
	22	9P&7/6P Housing Wire (J101)	ADX3295
	23	8P&6P Housing Wire (J102)	ADX3296
	24	14P Housing Wire (J104)	ADX3298
	25	11P&3P Housing Wire (J105)	ADX3299
	26	10P/5P Housing Wire (J106)	ADX3301
	27	10P/5P Housing Wire (J107)	ADX3301
	28	5P Housing Wire (J108)	ADX3302
	29	5P Housing Wire (J109)	ADX3302
	30	10P/5P Housing Wire (J110)	ADX3303
	31	5P Housing Wire (J111)	ADX3304
	32	10P/5P Housing Wire (J112)	ADX3305
	33	5P Housing Wire (J113)	ADX3306
	34	7P Housing Wire (J114)	ADX3307
	35	31P Shield Cable (J115)	ADX3308
	36	31P Shield Cable (J116)	ADX3308
	37	5P Housing Wire (J117)	ADX3309
	38	5P Housing Wire (J120)	ADX3312
	39	Drive Sheet X	AMR3636
	40	Drive Sheet Y	AMR3637
	41	Nyron Rivet	AEC1671
	42	Wire Saddle	AEC1745
	43	Flat Clamp	AEC1879
	44	PCB Support	AEC1938
	45	PCB Spacer	AEC1941
	46	PCB Spacer	AEC1947
	47	Earth Lead with Resistor (R2781)	• • • • •
	48	Earth Lead with Resistor (R2881)	• • • • •
	49	Conductive Plate X (F)	ANG2906
	50	Screw	ABA1364
	51	Screw	ABZ30P080FTC

2.6 PDP SERVICE ASSY (AWU1198)

- PDP Service Panel section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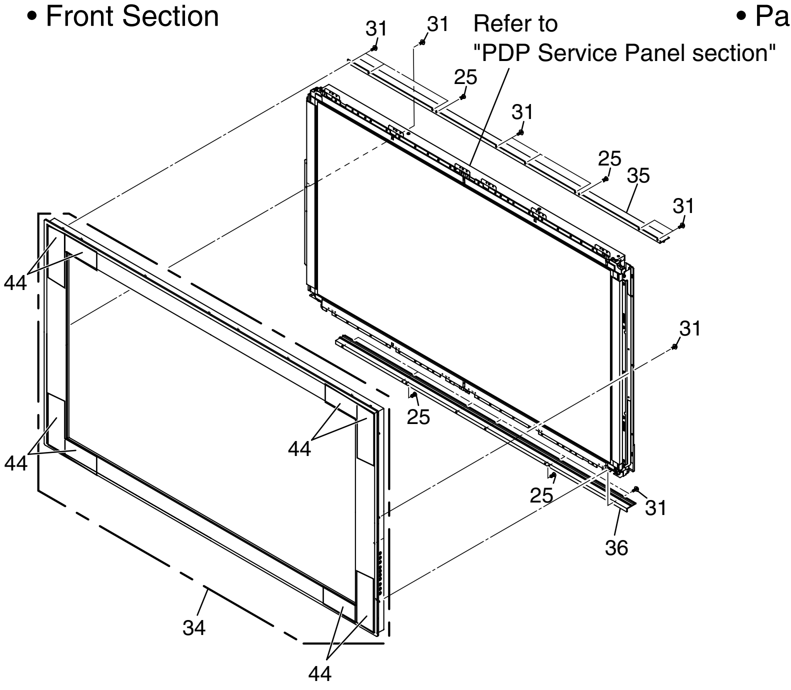
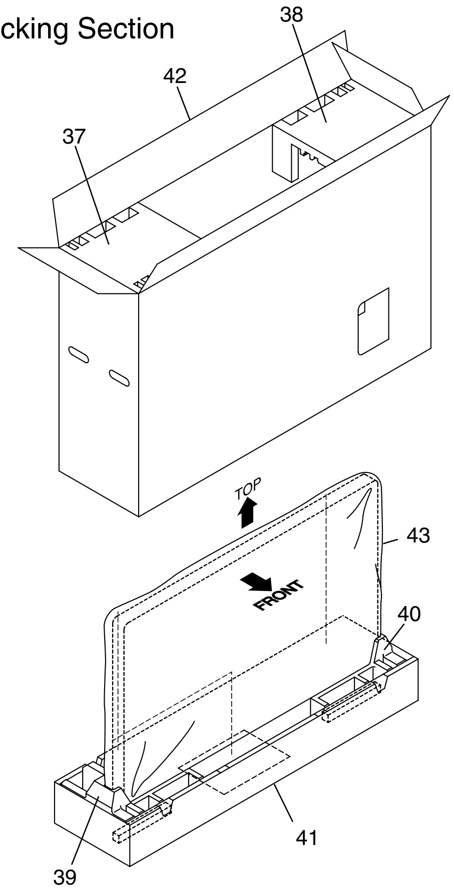
PDP SERVICE ASSY (AWU1198) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	P. Chassis (F) Assy	AWU1201
NSP	2	Plasma Panel (50FH) Assy	AWU1158
NSP	3	50FHD ADDRESS A Assy	AWW1127
NSP	4	50FHD ADDRESS B Assy	AWW1128
	5	50FHD SCAN A Assy	AWW1229
	6	50FHD SCAN B Assy	AWW1230
	7	Address Silicon (F)	AEH1104
	8	• • • • •	
	9	• • • • •	
	10	Address Holder Assy (B)	AMR3547
	11	• • • • •	
	12	SCAN Sheet	AMR3638
	13	Plate Holder	AMR3446
	14	Sub Frame (F)	ANA1937
	15	F Chassis V Assy L	ANA1953
	16	F Chassis V Assy R	ANA1954
	17	Front Chassis Assy (F)	ANA1957
	18	Terminal Panel (F)	ANG2914
	19	Address Heatsink	ANH1651
	20	Plate X (F)	ANG2906
	21	Wire Saddle	AEC1745
	22	PCB Support	AEC1938
	23	PCB Spacer	AEC1941
	24	PCB Spacer	AEC1947
	25	Nylon Livet	AEC2086
	26	Rear Case (F)	ANE1654
	27	Gasket ADH-FCH	ANK1850
	28	Screw	ABA1364
	29	Screw	ABZ30P080FTC
	30	Screw	AMZ30P060FTB
	31	Screw	APZ30P100FTB
	32	Screw	TBZ40P080FTB
	33	Screw	BBB30P120FNI
	34	F.Case Assy S (50F)	AMB2960
	35	Sassi T (Pls)	AAK2883
	36	Sassi B (Pls)	AAK2884
	37	Pad (50T-L)	AHA2546
	38	Pad (50T-R)	AHA2547
	39	Pad (50B-L)	AHA2548
	40	Pad (50B-R)	AHA2549
	41	Under Carton (505)	AHD3326
NSP	42	Upper Carton (505 SVC)	AHD3343
	43	Mirror Mat	AHG1284
	44	Service Pad	AEC2105

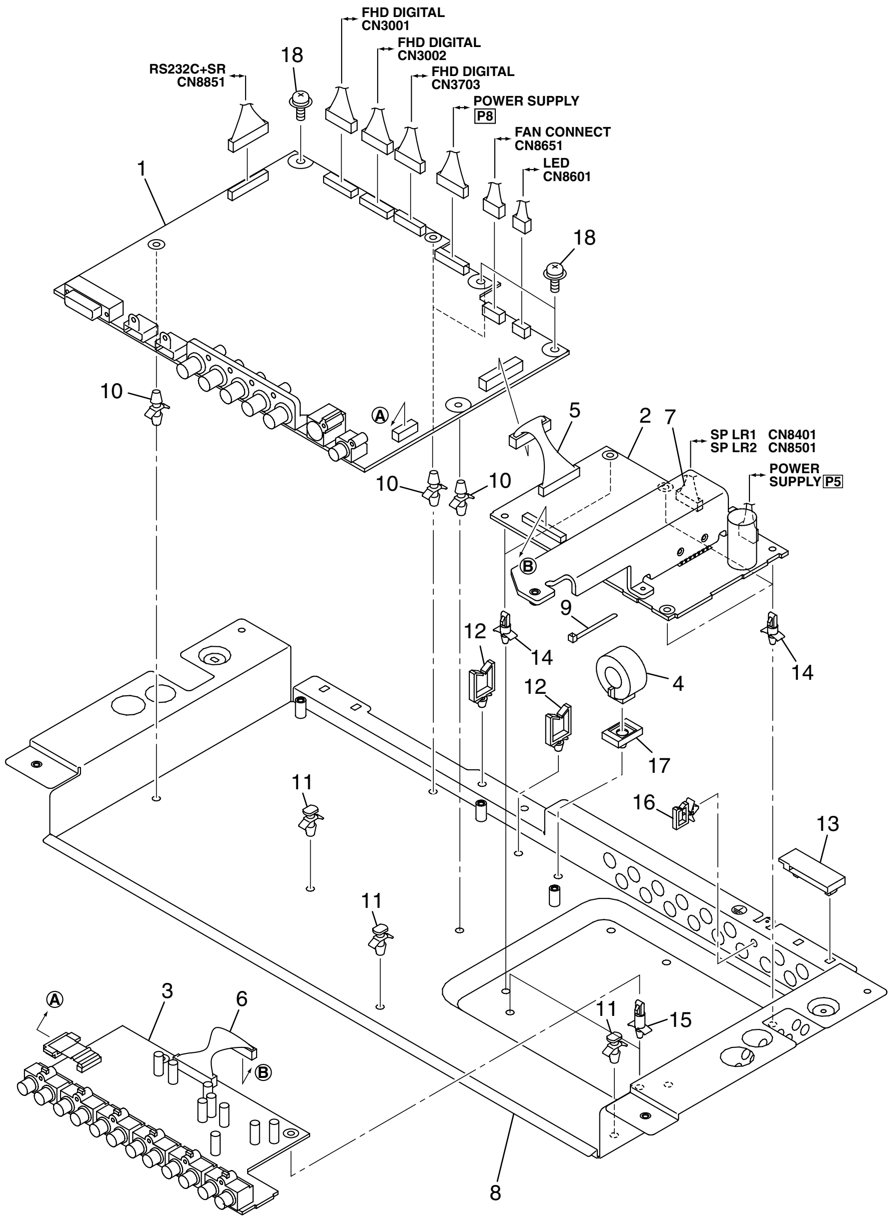
• Front Section



• Packing Section



2.7 MULTI BASE SECTION


FHD DIGITAL
CN3001
FHD DIGITAL
CN3002
FHD DIGITAL
CN3703
RS232C+SR
CN8851
POWER SUPPLY
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FAN CONNECT
CN8651
LED
CN8601
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SP LR2 CN8501
POWER
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MULTI BASE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FHD MAIN Assy	AWV2292
	2	FHD POWER AMP Assy	AWW1117
	3	FHD PRE AUDIO Assy	AWW1118
	4	Ferrite Core	ATX1044
	5	14P Housing Wire (J118)	ADX3310
	6	15P Housing Wire (J122)	ADX3314
	7	6P/3P Housing Wire (J123)	ADX3315
	8	Multi Base (F)	ANA1936
	9	Binder	AEC-093
	10	PCB Support	AEC1215

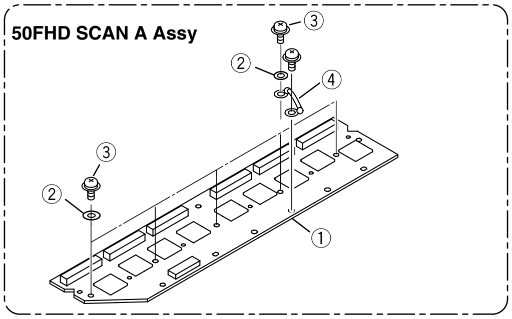
Mark	No.	Description	Part No.
NSP	11	PCB Support	AEC1232
	12	Wire Saddle	AEC1745
	13	Clamp	AEC1884
	14	PCB Spacer	AEC1941
	15	Circuit Board Spacer	AEC1960
	16	Wire Saddle	AEC2031
	17	Ferrite Core Holder	AEC1818
	18	Screw	ABA1364

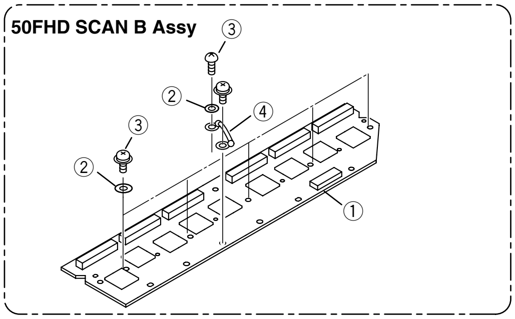
[NOTES ON THE PANEL CHASSIS ASSY]

- There are two (new and old) types of the Panel Chassis Assys.

■ Differences in the old and new Panel Chassis Assys

	Panel chassis Assy	① 50FHD SCAN A Assy	① 50FHD SCAN B Assy	② Washer (ABF1040)	③ Heatsink screw	④ Earth lead with resistor (R2781, R2881)	Note
Old	AWU1152	AWW1129	AWW1130	Used	PMH30P080FNI	Used	Although there is a screw with the remove-this-screw mark near the ③ Heatsink screw, never remove this screw.
New	AWU1201	AWW1229	AWW1230	Not used	PMH30P060FNI	Not used	





Notes:

① The old type of the Panel Chassis Assys was mounted in about the first 1090 units produced.
(As for PRO-FHD1, the old type of the Panel Chassis Assys was mounted in about the first 10 units produced.)

② Either the old or new type of the SCAN Assy can be attached to a Panel Chassis Assy of the old type.
However, be careful of the following:

- When the old type of the SCAN Assy (50FHD SCAN A Assy: AWW1129, 50FHD SCAN B Assy: AWW1130) is used, a ground wire with resistance is attached. After replacing the SCAN A/B Assy, be sure to secure the ground wire with resistance as it was originally. (Be careful not to mix up the washers.)
- When the new type of the SCAN Assy (50FHD SCAN A Assy: AWW1229, 50FHD SCAN B Assy: AWW1230) is used, a ground wire with resistance is not attached. Attaching a ground wire with resistance is not required after replacement of the SCAN Assy.

3. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10^1 → 561 .... RD1/4PU$\boxed{5}\boxed{6}\boxed{1}$J
47k Ω → 47 x 10^3 → 473 .... RD1/4PU$\boxed{4}\boxed{7}\boxed{3}$J
0.5 Ω → R50 .... RN2H$\boxed{R}\boxed{5}\boxed{0}$K
1 Ω → 1R0 .... RS1P$\boxed{1}\boxed{R}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10^1 → 5621 .... RN1/4PC$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		1..50 FHD ADDRESS ASSY	AWV2295
NSP		2..50FHD ADDRESS A ASSY	AWW1127
NSP		2..50FHD ADDRESS B ASSY	AWW1128
NSP		1..50FHD SCAN ASSY	AWV2401
		2..50FHD SCAN A ASSY	AWW1229
		2..50FHD SCAN B ASSY	AWW1230
NSP		1..DIGITAL SENSOR ASSY	AWV2290
		2..FHD DIGITAL ASSY	AWW1115
		2..PANEL SENSOR ASSY	AWW1116
NSP		1..FHD FUKUGO ASSY	AWV2291
		2..FHD POWER AMP ASSY	AWW1117
		2..FHD PRE AUDIO ASSY	AWW1118
		2..FHD SP LR1 ASSY	AWW1119
		2..FHD SP LR2 ASSY	AWW1120
		2..FHD LED ASSY	AWW1121
		2..FHD FAN CONNECT ASSY	AWW1122
		2..FHD IR ASSY	AWW1123
		2..FHD KEY ASSY	AWW1124
		2..FHD KEY CONTROL ASSY	AWW1125
		2..FHD RS232C+SR ASSY	AWW1126
		1..FHD MAIN ASSY	AWV2292
		1..50FHD X DRIVE ASSY	AWV2293
		1..50FHD Y DRIVE ASSY	AWV2294

Unit Name: 50FHD SCAN A ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 2701-2709		SN755870KPZT-P
	D 2701		1SS355
	D 2702-2707		1SS302

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN2701	13P CONNECTER	AKP1261
	CN2702-2707	90PIN CONNECTOR	AKM1358

RESISTORS

Mark	No.	Description	Part No.
	R 2705,2710,2713,2716		RAB4C221J
	R 2719,2722,2725,2728		RAB4C221J
	R 2731		RAB4C221J
	R 2791		RS1/8SQ104J
	R 2792		RS1/8SQ124J
	Other Resistors		RS1/16S###J

CAPACITORS

Mark	No.	Description	Part No.
	C 2701,2702,2711,2712		ACG1088
	C 2703,2713,2723,2733		CKSRYB105K6R3
	C 2704,2706,2707,2714		CCSRCH390J50
	C 2708-2710,2718-2720		CCSRCH181J50
	C 2716,2717,2724,2726		CCSRCH390J50
	C 2721,2722,2731,2732		ACG1088
	C 2727,2734,2736,2737		CCSRCH390J50
	C 2728-2730,2738-2740		CCSRCH181J50
	C 2741,2742,2751,2752		ACG1088
	C 2743,2753,2763,2773		CKSRYB105K6R3
	C 2744,2746,2747,2754		CCSRCH390J50
	C 2748-2750,2758-2760		CCSRCH181J50
	C 2756,2757,2764,2766		CCSRCH390J50
	C 2761,2762,2771,2772		ACG1088
	C 2767,2774,2776,2777		CCSRCH390J50
	C 2768-2770,2778-2780		CCSRCH181J50
	C 2781,2782		ACG1088
	C 2783		CKSRYB105K6R3
	C 2784,2786,2787		CCSRCH390J50
	C 2788-2790		CCSRCH181J50

Unit Name: 50FHD SCAN B ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 2801-2809		SN755870KPZT-P
	D 2801		1SS355
	D 2802-2807		1SS302

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN2801	13P CONNECTER	AKP1261
	CN2802-2807	90PIN CONNECTOR	AKM1358

RESISTORS

Mark	No.	Description	Part No.
	R 2805,2810,2813,2816		RAB4C221J
	R 2819,2822,2825,2828		RAB4C221J
	R 2831		RAB4C221J
	R 2891		RS1/8SQ104J
	R 2892		RS1/8SQ124J
	Other Resistors		RS1/16S###J

CAPACITORS

Mark	No.	Description	Part No.
	C 2801,2802,2811,2812		ACG1088
	C 2803,2813,2823,2833		CKSRYB105K6R3
	C 2805-2807,2815-2817		CCSRCH390J50
	C 2808-2810,2818-2820		CCSRCH181J50
	C 2821,2822,2831,2832		ACG1088

Mark	No. Description	Part No.
	C 2825-2827,2835-2837	CCSRCH390J50
	C 2828-2830,2838-2840	CCSRCH181J50
	C 2841,2842,2851,2852	ACG1088
	C 2843,2853,2863,2873	CKSRYB105K6R3
	C 2845-2847,2855-2857	CCSRCH390J50
	C 2848-2850,2858-2860	CCSRCH181J50
	C 2861,2862,2871,2872	ACG1088
	C 2865-2867,2875-2877	CCSRCH390J50
	C 2868-2870,2878-2880	CCSRCH181J50
	C 2881,2882	ACG1088
	C 2883	CKSRYB105K6R3
	C 2885-2887	CCSRCH390J50
	C 2888-2890	CCSRCH181J50

Unit Name: 50FHD ADDRESS A ASSY

- **Block Name: ADR RESONANCE BLOCK**

SEMICONDUCTORS

	IC 1601	TND307TD
	Q 1601-1605	HAT3041R
	Q 1606,1607	QSZ2
	Q 1608	2SA1163
	Q 1609,1610	RN1901
	D 1601,1605,1609,1613	EP05FA20
	D 1603,1607,1611,1615	UDZS15(B)
	D 1604,1608,1612,1616	1SS355
	D 1617	EP05FA20
	D 1619	UDZS15(B)
	D 1620	1SS355
	D 1621	1SS302

MISCELLANEOUS

	L 1601-1605	ATH1199

RESISTORS

	R 1622,1623	RS1/16SS330J
	Other Resistors	RS1/16S###J

CAPACITORS

	C 1601,1603,1605,1607	ACG1135
	C 1602,1604,1606,1608	ACG1136
	C 1609	ACG1135
	C 1610	ACG1136
	C 1611	ACG1098
	C 1612	CKSYB105K16

- **Block Name: ADR LOGIC BLOCK**

SEMICONDUCTORS

	IC 1501	PEE002A

MISCELLANEOUS

	L 1501	QTL1013
	CN1501	AKM1276
	CN1502	AKM1348

RESISTORS

	R 1501-1505	RS1/16SS1000F
	R 1535,1536	RS1/16S0R0J
	Other Resistors	RS1/16SS###J

Mark	No. Description	Part No.

CAPACITORS

	C 1501-1504,1507	CKSSYF104Z16
	C 1505,1506	CKSSYB102K50
	C 1508,1509	CKSRYB105K6R3
	C 1510	CCSSCH101J50
	C 1512,1514	CCSSCH470J50

- **Block Name: ADR CONNECT BLOCK**

RESISTORS

	All Resistors	RS1/16SS###J

CAPACITORS

	C 1551-1555	CKSSYF104Z16

Unit Name: 50FHD ADDRESS B ASSY

- **Block Name: ADR RESONANCE BLOCK**

SEMICONDUCTORS

	IC 1801	TND307TD
	Q 1801-1805	HAT3041R
	Q 1806,1807	QSZ2
	Q 1808	2SA1163
	Q 1809,1810	RN1901
	D 1801,1805,1809,1813	EP05FA20
	D 1803,1807,1811,1815	UDZS15(B)
	D 1804,1808,1812,1816	1SS355
	D 1817	EP05FA20
	D 1819	UDZS15(B)
	D 1820	1SS355
	D 1821	1SS302

MISCELLANEOUS

	L 1801-1805	ATH1199

RESISTORS

	R 1822,1823	RS1/16SS330J
	Other Resistors	RS1/16S###J

CAPACITORS

	C 1801,1803,1805,1807	ACG1135
	C 1802,1804,1806,1808	ACG1136
	C 1809	ACG1135
	C 1810	ACG1136
	C 1811	ACG1098
	C 1812	CKSYB105K16

- **Block Name: ADR LOGIC BLOCK**

SEMICONDUCTORS

	IC 1701	PEE002A

MISCELLANEOUS

	L 1701	QTL1013
	CN1701	AKM1276
	CN1702	AKM1348

RESISTORS

	R 1701-1705	RS1/16SS1000F
	R 1735,1736	RS1/16S0R0J
	Other Resistors	RS1/16SS###J

CAPACITORS

Mark No.	Description	Part No.
C 1701-1704,1707		CKSSYF104Z16
C 1705,1706		CKSSYB102K50
C 1708,1709		CKSRYB105K6R3
C 1710		CCSSCH101J50
C 1712,1714		CCSSCH470J50

• Block Name: ADR CONNECT BLOCK

RESISTORS

Mark No.	Description	Part No.
All Resistors		RS1/16SS###J

CAPACITORS

Mark No.	Description	Part No.
C 1751-1755		CKSSYF104Z16

Unit Name: 50 FHD Y DRIVE ASSY

MISCELLANEOUS

Mark No.	Description	Part No.
2001		ANH1639
2002		BMZ30P080FTC
2003		AEH1092
2004		ANG2907
2005		ABA1364

• Block Name: Y LOGIC BLOCK

SEMICONDUCTORS

Mark No.	Description	Part No.
IC 2001,2007		TC74ACT541FT
IC 2003,2004		TC74ACT540FT
IC 2005,2006		TC74VHC08FTS1
D 2090,2091		1SS355

MISCELLANEOUS

Mark No.	Description	Part No.
K 2010,2014	TEST PIN	AKX1061
VR2010,2011		CCP1390
CN2001	40P CONNECTER	AKM1348

RESISTORS

Mark No.	Description	Part No.
R 2001,2003,2016,2022		RAB4C470J
R 2002,2004		RAB4C101J
R 2005,2006,2017,2026		RAB4C472J
R 2023		RAB4C470J
R 2027		RAB4C472J
Other Resistors		RS1/16S###J

CAPACITORS

Mark No.	Description	Part No.
C 2001,2009		CEHAT470M16
C 2002,2004-2008		CKSRYB104K16
C 2010,2011		CCSRCH331J50

• Block Name: Y RESONANCE BLOCK

SEMICONDUCTORS

Mark No.	Description	Part No.
IC 2101,2104		TND307TD
IC 2102		PS9117
IC 2103,2151		AXF1159
IC 2181		BA10393F
Q 2101		2SC2412K
Q 2102,2103,2151,2152		QSZ2
Q 2181		2SC4081
D 2101		UDZS5R6(B)
D 2105,2154		D1FL40
D 2110,2159		1SS302

MISCELLANEOUS

Mark No.	Description	Part No.
L 2101,2151		ATH1201
L 2102,2152		ATH1204

RESISTORS

Mark No.	Description	Part No.
R 2109,2118,2152,2161		RS1/10S2R2J
R 2113,2156		ACN1174
R 2114,2115,2157,2158		RS3LMF100J
R 2116,2117,2159,2160		RS1/10S104J
R 2121		RS1/16S3300F
R 2181,2184		RS1/10S1003F
R 2182,2185		RS1/16S5601F
R 2186,2187		RS1/16S6801F
Other Resistors		RS1/16S###J

CAPACITORS

Mark No.	Description	Part No.
C 2101,2181-2184		CKSRYB104K16
C 2102,2113,2162,2164		CEHAT470M25
C 2103,2114		CKSRYF104Z50
C 2104,2117,2151,2163		CKSYB105K25
C 2107,2108,2154,2155		CCG1186
C 2115,2116,2160,2161		ACG1112
C 2118-2121,2186-2189		ACE1168
C 2185		CKSRYB105K10

• Block Name: Y SUS BLOCK

SEMICONDUCTORS

Mark No.	Description	Part No.
IC 2202,2221,2232,2242		PS9117
IC 2203,2211,2222,2231		TND307TD
IC 2241,2252		TND307TD
IC 2251		TC7SH04FUS1
IC 2271		TND301S
IC 2301,2302		AXF1161
IC 2351		PQ05DZ11
IC 2380		PQ09DZ11
Q 2211		2SK3325
Q 2221,2232,2242,2243		QSZ2
Q 2222,2231,2241,2352		2SC4081
Q 2239,2271		2SK3050
Q 2240		2SC2412K
Q 2251		QSZ2
Q 2281-2283		2SK3399
Q 2290		DTC123TKA
Q 2291		DTC143EK
Q 2351		HN1B04FU
D 2208,2221,2231,2241		UDZS5R6(B)
D 2222,2223,2232,2233		CRH01
D 2242,2243,2281,2282		CRH01
D 2251		UDZS5R1(B)
D 2271		1SS301
D 2272		UDZS16(B)
D 2283,2289		UDZS9R1(B)
D 2290		UDZS8R2(B)
D 2351,2380		1SS355

MISCELLANEOUS

Mark No.	Description	Part No.
L 2351,2353,2354		BTH1134
L 2352,2355,2356		ATH1186
F 2301-2330		ATX1062
F 2351		CTF1449
K 2301,2351	TEST PIN	AKX1061

Mark	No.	Description	Part No.
	KN2202-2208,2301-2307		ANK1841
	CN2351	CONNECTOR	B9B-EH
	CN2353	CONNECTOR	AKM1277
	CN2354,2356	CONNECTOR	AKM1281
	CN2355,2357	CONNECTOR	AKM1276

RESISTORS

	R 2202,2206		RS3LMF561J
	R 2211,2214		RS3LMF3R9J
	R 2275		RS3LMF181J
	R 2288-2293		RS3LMF5R6J
	R 2301,2303,2307,2308		RS1/10S100J
	R 2302,2304		RS1/10S0R0J
	R 2305,2311		ACN1168
	R 2351		ACN1162
	Other Resistors		RS1/16S###J

CAPACITORS

	C 2211,2223,2233,2243		CEHAT470M25
	C 2212,2272		CKSRYF104Z50
	C 2221,2231,2241,2253		CKSYB105K25
	C 2222,2232,2242,2290		CKSRYB104K16
	C 2251		CCSRCH331J50
	C 2252,2362		CKSRYB105K10
	C 2256,2271,2291,2352		CEHAT470M25
	C 2273,2281		CEHAT2R2M2E
	C 2284,2286		ACE1163
	C 2292		CKSYB105K25
	C 2299		CKSRYB104K25
	C 2301,2305		ACH1445
	C 2302-2304,2306-2308		ACE1180
	C 2309,2310		CCG1186
	C 2351,2353,2361,2363		CEHAT470M16
	C 2354,2359,2364,2380		CKSRYB104K16
	C 2356,2357		ACH1449
	C 2358		CEHAT101M10
	C 2360		CKSRYB473K16
	C 2367,2368		CEHAT101M25
	C 2369		CEHAT470M16
	C 2381		CKSRYB104K16

• Block Name: Y SCAN BLOCK

SEMICONDUCTORS

	IC 2401,2403,2409		TLP116
	IC 2402,2407,2421,2490		TC74AC540FT
	IC 2404-2406,2408,2410		PS9117
	IC 2481,2482		PST3638UR

MISCELLANEOUS

	L 2401		BTH1136
	L 2402,2403		BTH1134
	F 2401,2402		ATX1062
	CN2401,2402	15P CONNECTER	AKM1200

RESISTORS

	R 2405,2417		RAB4C220J
	Other Resistors		RS1/16S###J

CAPACITORS

	C 2401,2407,2414		CEHAT101M10
	C 2402,2403,2405,2406		CKSRYB104K16
	C 2404,2411		ACH1413
	C 2408-2410,2412,2413		CKSRYB104K16
	C 2415,2420,2421		CKSRYB104K16

Mark	No.	Description	Part No.
	C 2417,2418		ACE1181
	C 2481,2482		CKSRYB102K50

• Block Name: Y VH DD CON BLOCK

SEMICONDUCTORS

	IC 2501,2551		MIP2E3DMU
	IC 2502,2552		PS2701A-1(L)
	IC 2508,2557		TA76431FR
	IC 2553		BA10358F
	Q 2501		HN1C01FU
	Q 2551		2SC2412K
	D 2501		U1ZB330
	D 2502		D1FL40
	D 2503,2505,2555,2556		CRH01
	D 2504,2551,2552,2554		CRF03
	D 2506		UDZS6R2(B)
	D 2507		UDZS12(B)
	D 2558		1SS355
	D 2559		UDZS4R7(B)

MISCELLANEOUS

	VR2501		CCP1390
	VR2551		CCP1392
	T 2501		ATK1158
	T 2551		ATK1153

RESISTORS

	R 2509		RAB4C472J
	R 2551,2552		RS1/10S1803F
	R 2554		RS1/10S2203F
	R 2557,2560		RS1/16S5601F
	R 2564		RS1/16S1002F
	R 2565		RS1/16S2202F
	R 2566		RS1/16S4702F
	R 2567		RS1/16S6801F
	R 2568-2570		RS1/10S224J
	Other Resistors		RS1/16S###J

CAPACITORS

	C 2502,2507,2553,2561		CKSRYB104K16
	C 2503,2554		CEHAT101M16
	C 2505,2555		CEHAT101M25
	C 2506		ACH1450
	C 2508		CEHAT221M16
	C 2509		CEHAT470M25
	C 2551		ACH1448
	C 2552		ACH1451
	C 2556		CKSRYF104Z50
	C 2557,2559,2560		CKSRYB104K25
	C 2558		CEHAT221M25
	C 2562		CCG1186

• Block Name: Y DD CON BLOCK

SEMICONDUCTORS

	IC 2601		PS2701A-1(L)
	IC 2605,2657		TA76431FR
	IC 2651		MIP2E3DMU
	IC 2652,2654,2658		TLP181(P-GR)
	IC 2653		BA10358F

Mark No. Description	Part No.
Q 2601,2681	2SD1898
Q 2602	2SA1576A
Q 2603,2684	HN1C01FU
Q 2604,2605,2685	DTC143EUA
Q 2651	2SA2005
Q 2652	2SA1163
Q 2682,2683	2SC4081
D 2602,2651,2654,2656	CRH01
D 2603,2684	1SS301
D 2604,2606,2658,2659	1SS355
D 2607,2608	UDZS4R7(B)
D 2653	CRF03
D 2682,2683	CRH01
D 2685,2689	UDZS5R6(B)
D 2686-2688	1SS355
D 2690	UDZS15(B)

MISCELLANEOUS

VR2651	CCP1390
T 2601	ATK1156
T 2651	ATK1163
T 2681	ATK1162

RESISTORS

R 2610,2613,2662,2666	RS1/16S4701F
R 2615	RAB4C472J
R 2651	RS1/10S4702F
R 2653,2660	RS1/10S1501F
R 2654,2691	RS3LMF301J
R 2661	RS1/16S1002F
R 2667	RS1/16S4701F
R 2668-2670,2690	RS1/10S224J
R 2694	RS1/16S5601F
R 2698	RS1/16S6801F
Other Resistors	RS1/16S###J

CAPACITORS

C 2602,2681,2686	CEHAT101M25
C 2603,2685	ACG1105
C 2604	CKSRYB102K50
C 2605	CEHAT221M10
C 2606,2607,2653,2684	CKSRYB104K16
C 2652	ACH1449
C 2654	CEHAT101M16
C 2655,2660	CKSRYF104Z50
C 2656,2657	CEHAT221M35
C 2658	CKSRYB104K25
C 2659	CKSRYB105K10
C 2661	CCG1186
C 2682	CKSYB105K25
C 2683	CKSRYB103K50
C 2687,2688	CKSRYB104K16

Unit Name: 50 FHD X DRIVE ASSY

MISCELLANEOUS

1001	BMZ30P080FTC
1001	ANH1639
1002	AEH1092

Mark No. Description	Part No.

• Block Name: X LOGIC BLOCK

SEMICONDUCTORS

IC 1001	TC74ACT541FT
IC 1002	TC74ACT540FT
IC 1003	TC74VHC00FTS1
D 1001,1002	1SS355

MISCELLANEOUS

VR1001,1002	CCP1390
S 1001	ASH1047
CN1001 40P CONNECTER	AKM1348

RESISTORS

R 1001,1003,1009	RAB4C470J
R 1005,1006,1011	RAB4C472J
Other Resistors	RS1/16S###J

CAPACITORS

C 1001,1003	CEHAT470M16
C 1002,1004,1005	CKSRYB104K16
C 1006,1007	CCSRCH331J50

• Block Name: X RESONANCE BLOCK

SEMICONDUCTORS

IC 1101,1104	TND307TD
IC 1102	PS9117
IC 1103,1131	AXF1159
IC 1151	BA10393F
Q 1101	2SC2412K
Q 1102,1103,1131,1132	QSZ2
Q 1151	2SC4081
D 1101	UDZS5R6(B)
D 1106,1135	D1FL40
D 1112,1141	1SS302

MISCELLANEOUS

L 1101,1131	ATH1201
L 1102,1132	ATH1204

RESISTORS

R 1109,1118,1132,1141	RS1/10S2R2J
R 1112,1135	ACN1174
R 1114,1117,1137,1140	RS3LMF100J
R 1115,1116,1138,1139	RS1/10S104J
R 1121	RS1/16S3300F
R 1151,1154	RS1/10S1003F
R 1152,1155	RS1/16S5601F
R 1156,1157	RS1/16S6801F
Other Resistors	RS1/16S###J

CAPACITORS

C 1101,1151,1153	CKSRYB104K16
C 1102,1113,1131,1143	CEHAT470M25
C 1103,1114	CKSRYF104Z50
C 1104,1117,1132,1144	CKSYB105K25
C 1106,1108,1135,1136	CCG1186
C 1115,1116,1141,1142	ACG1112
C 1118-1121,1156-1159	ACE1168
C 1154	CKSSYB104K10
C 1155	CKSRYB105K10

Mark No. Description Part No.

• Block Name: X SUS BLOCK

SEMICONDUCTORS

IC 1201,1206	PS9117
IC 1202,1207,1208,1210	TND307TD
IC 1203,1205	AXF1160
IC 1204	PQ05DZ11
IC 1209	TC7SH04FUS1
IC 1211	PQ09DZ11
Q 1201	2SC2412K
Q 1202,1205,1208,1209	QSZ2
Q 1203	HN1B04FU
Q 1204	DTC124EUA
Q 1206	2SC4081
Q 1207	R5009ANJ
Q 1251	DTC143EK
Q 1252	DTC123TKA
D 1201,1205	UDZS5R6(B)
D 1202,1203,1206,1210	CRH01
D 1204,1211	1SS355
D 1207	1SS302
D 1208	UDZS5R1(B)
D 1209	UDZS16(B)
D 1251	UDZS8R2(B)

MISCELLANEOUS

L 1201-1203	BTH1134
L 1204-1206	ATH1186
F 1201	CTF1449
K 1201	AKX1061
KN1201-1207,1210-1217	ANK1841
CN1201,1203 CONNECTER	AKM1281
CN1202,1205 CONNECTER	AKM1276
CN1204 CONNECTER	AKM1277
CN1206 CONNECTER	B8B-EH

RESISTORS

R 1210,1226,1253,1254	RS1/10S100J
R 1212	ACN1166
R 1217,1232	RS1/10S0R0J
R 1220,1237	ACN1168
R 1222	RS3LMF180J
Other Resistors	RS1/16S###J

CAPACITORS

C 1201,1211-1213,1238	CKSRYF104Z50
C 1202,1231,1237	CKSYB105K25
C 1203,1204	ACH1449
C 1207,1216,1218,1219	CKSRYB104K16
C 1208,1214,1246	CEHAT470M16
C 1209,1215,1217,1233	CEHAT470M25
C 1210,1240,1244	CEHAT101M25
C 1221,1222	ACG1126
C 1223,1224	ACH1445
C 1225-1230	ACE1180
C 1232,1245,1250,1251	CKSRYB104K16
C 1235	CEHAT2R2M2E
C 1236	CKSRYB105K10
C 1239	CCSRCH331J50
C 1241-1243	CEHAT470M25
C 1252	CKSRYB104K25

Mark No. Description Part No.

• Block Name: X DD CON BLOCK

SEMICONDUCTORS

IC 1321	MIP2E3DMU
IC 1322	PS2701A-1(L)
IC 1327	TA76431FR
Q 1301	2SD1898
Q 1302	2SC4081
Q 1331,1332	HN1C01FU
D 1301,1324	D1FL40
D 1302,1303,1325,1326	CRH01
D 1304	1SS301
D 1305	UDZS5R6(B)
D 1306,1307,1331	1SS355
D 1321,1322	CRF03
D 1323	U1ZB330
D 1332,1333	UDZS8R2(B)

MISCELLANEOUS

VR1321	CCP1392
T 1301	ATK1162
T 1321	ATK1153

RESISTORS

R 1321,1322	RS1/10S2203F
R 1328	RS1/16S5601F
R 1331	RAB4C472J
Other Resistors	RS1/16S###J

CAPACITORS

C 1301,1306,1326	CEHAT101M25
C 1302,1325	CKSYB105K25
C 1303	CKSRYB103K50
C 1304,1307,1323	CKSRYB104K16
C 1305	ACG1105
C 1321	ACH1361
C 1322	ACH1452
C 1324	CEHAT101M16
C 1327	CKSRYB104K25
C 1328	CEHAT221M25

Unit Name: FHD MAIN ASSY

SEMICONDUCTORS

IC 4803	AGC1005
IC 5005	AGC1012
IC 6203	AGC1013

MISCELLANEOUS

• Block Name: BOARD IF A BLOCK

SEMICONDUCTORS

IC 4006	THC63LVD103F
Q 4001	DTA124EUA
Q 4002	2SA1586
D 4001,4003	1SS355
D 4002	1SS301

MISCELLANEOUS

⚠F 4001,4003,4004	CCG1162
⚠F 4005-4010	ATF1209
CN4003 CONNECTOR	AKM1276

Mark No.	Description	Part No.

RESISTORS

R 4001,4002,4025,4026		RS1/10S0R0J
R 4094		RS1/10S0R0J
Other Resistors		RS1/16SS###J

CAPACITORS

C 4001		ACG7046
C 4002,4003		CEHVKW470M16
C 4008-4012		CKSSYF104Z16
C 4014		CKSSYB103K16

• Block Name: BOARDIF B BLOCK

SEMICONDUCTORS

IC 4206		THC63LVD103F
Q 4201		DTC124EUA
Q 4203		RN2901

MISCELLANEOUS

⚠F 4201-4206		ATF1209
⚠F 4207		CCG1162
⚠F 4208-4210		CTF1410
CN4203	CONNECTOR	AKM1274
CN4205,4206	31P CONNECTER	AKM1239
CN4207	CONNECTOR	AKM1278
All Resistors		RS1/16SS###J

CAPACITORS

C 4201		ACG7046
C 4207-4211		CKSSYF104Z16

• Block Name: REG BLOCK

SEMICONDUCTORS

IC 4401,4402		MM1661JH
IC 4403		PQ090DNA1ZPH
IC 4404		PQ033ENA1ZPH
IC 4405		PQ050DNA1ZPH
IC 4407,4409		BD6522F
IC 4408		NCP1117STT15
IC 4410		NCP1117STT18
Q 4401		DTC124EUA
D 4401-4404,4406-4408		1SS355
D 4410		1SS355

MISCELLANEOUS

⚠F 4401,4402		CCG1162
U 4401		AXY1136

RESISTORS

R 4401,4428		RS1/10S1R5J
R 4403-4406,4410,4429		RS1/10S0R0J
Other Resistors		RS1/16SS###J

CAPACITORS

C 4401,4402		CKSSYB471K50
C 4403		CKSRYB105K10
C 4404,4414,4443,4444		CKSSYF104Z16
C 4405,4420,4427,4431		DCH1165
C 4406,4422,4432,4433		ACG7046
C 4419,4425,4430,4436		DCH1201
C 4439,4442,4445-4447		ACG7046
C 4449		ACG7046

Mark No.	Description	Part No.

• Block Name: VIDEO SW BLOCK

SEMICONDUCTORS

IC 4601		R2S11002AFT
Q 4601,4602		2SA1586

MISCELLANEOUS

JA4601	JACK	VKB1156
CN4601	DIN SOCKET AU	AKP1298

RESISTORS

R 4609,4610		RS1/16S5600F
R 4612,4614		RS1/16S1800F
R 4616,4631,4632		RS1/16S75R0F
Other Resistors		RS1/16SS###J

CAPACITORS

C 4601-4610		CKSRYB105K10
C 4611,4612		CKSSYB103K16
C 4613		CEHVKW101M6R3
C 4621,4627,4628,4657		CKSSYF104Z16
C 4622		DCH1201
C 4623,4626		CKSSYB104K10
C 4632		ACG7046
C 4647		CKSSYB473K16
C 4653		ACG1122
C 4658		DCH1165

• Block Name: IF UCOM BLOCK

SEMICONDUCTORS

IC 4801		PST9230N
IC 4802		TC7W126FU
IC 4804		TC74VHC08FTS1

MISCELLANEOUS

X 4801		ASS1168
X 4802		ASS1172

RESISTORS

R 4850-4853		RAB4CQ103J
Other Resistors		RS1/16SS###J

CAPACITORS

C 4801		CKSSYB472K25
C 4802,4803		CCSSCH180J50
C 4805		ACG7046
C 4806-4811		CKSSYF104Z16

• Block Name: MAIN UCOM BLOCK

SEMICONDUCTORS

IC 5001		BR24L64F-W
IC 5002		MB91305PMC-G-BND
IC 5003		PQ200WNA1ZPH
IC 5006		PST3628UR
IC 5007		TC74VHC125FTS1
IC 5008		NJM12904V
Q 5001		2SJ461A
Q 5003,5004		HN1K02FU
Q 5007		2SC4116
D 5001		1SS355
D 5002		SML-311UT

MISCELLANEOUS

Mark	No.	Description	Part No.
	X 5001		CSS1616
	CN5001	50P CONNECTER PBF	AKM1353

RESISTORS

Mark	No.	Description	Part No.
	R 5001,5002		ACN1248
	R 5075,5076		RS1/16S0R0J
	R 5084		RS1/16SS9101F
	R 5085		RS1/16SS3301F
	R 5092		RS1/10S0R0J
	R 5104		RS1/16SS1002F
	R 5105		RS1/16SS1501F
	R 5106		RS1/16SS8201F
	R 5108		RS1/16SS6801F
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 5001		CCSRCH221J50
	C 5002-5011,5047,5048		CCSSCH470J50
	C 5012		CKSSYB472K25
	C 5013,5016,5050		CKSSYB103K16
	C 5017		ACG7046
	C 5018,5019		DCH1165
	C 5022-5046		CKSSYF104Z16
	C 5049		CKSRYB105K10

• Block Name: ADC BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 5201		TC74VHC08FTS1
	IC 5202		AD9985KSTZ-110
	IC 5203		TC7WH123FU
	Q 5204-5206		2SC4116
	D 5201-5203		1SS302
	D 5204,5205		UDZS5R6(B)
	D 5206		1SS301

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	F 5201,5203		CCG1162
	JA 5201		AKX1059

RESISTORS

Mark	No.	Description	Part No.
	R 5201-5203		ACN1251
	R 5210,5255		RS1/16S0R0J
	R 5211-5213		RS1/16S75R0F
	R 5234-5236		RS1/16S102J
	R 5256		RS1/16SS2701F
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 5201,5202		CCSRCH220J50
	C 5203-5205,5224		CKSRYB105K10
	C 5206		CKSSYB823K10
	C 5207		CKSSYB822K16
	C 5208,5216,5217,5219		CKSSYF104Z16
	C 5211-5213,5220		ACG7046
	C 5218,5222,5225		CKSSYB473K16
	C 5221,5223,5226-5230		CKSSYF104Z16
	C 5232,5233,5241,5242		CKSSYF104Z16
	C 5240		CKSSYB104K10

• Block Name: VDEC BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 5401		HY57V161610ETP-8
	IC 5402		UPD64015AGM-UEU
	IC 5403		TVP5150AM1PBS

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	F 5401,5403,5405-5407		CCG1162
⚠	F 5409,5411		CCG1162
	X 5401		ASS1189
	X 5402		ASS1191

RESISTORS

Mark	No.	Description	Part No.
	R 5401-5404		ACN1246
	R 5405,5406		BCN1067
	R 5407-5409		RS1/16S0R0J
	R 5426		RS1/16SS6200D
	R 5439		RS1/16S334J
	R 5440		RS1/16SS2201D
	R 5443		RS1/16SS1001D
	R 5445-5448		RAB4CQ220J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 5401-5403		CKSRYB105K10
	C 5404,5405		CCSSCH100D50
	C 5406,5407		CKSSYB103K16
	C 5408,5409		CCSSCH8R0D50
	C 5414-5420,5422-5430		CKSSYF104Z16
	C 5432-5456,5461,5463		CKSSYF104Z16
	C 5457,5458,5494		ACG7046
	C 5459,5460,5462		CKSSYB104K10
	C 5464,5469,5472,5474		CKSSYF104Z16
	C 5465-5468,5470,5471		CKSSYB104K10
	C 5473,5475,5477-5479		CKSSYB104K10
	C 5476,5480,5482,5483		CKSSYF104Z16
	C 5481,5484-5486		CKSSYB104K10
	C 5492,5493		CKSSYF104Z16
	C 5495,5496		CEHVKW101M6R3

• Block Name: RGB SW BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 5601		R2S11001FT

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 5601-5603		CKSRYB105K10
	C 5604,5605		CCSRCH680J50
	C 5606-5610,5612-5614		CKSSYB103K16
	C 5616		CEHVKW101M6R3
	C 5618-5623		CKSSYB103K16
	C 5633,5634,5647,5655		CKSSYF104Z16
	C 5646,5654		ACG7046

• Block Name: DSEL BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 5801		TC74VCX541FT
	IC 5802		PD6523A

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 5801,5802		BTX1042
⚠	F 5803,5804		ATF1211
	X 5801		ASS1194

RESISTORS

Mark	No.	Description	Part No.
	R 5801-5803		ACN1251
	R 5804-5806		BCN1067
	R 5830		RAB4CQ101J
	R 5831		RAB4CQ470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 5803,5804,5806-5816		CKSSYF104Z16
	C 5818-5823		CKSSYF104Z16
	C 5831		ACG7046
	C 5832,5833		CKSSYB103K16
	C 5834,5835		CKSRYB105K10

• Block Name: IP BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6001		PE5504B
	IC 6002,6003		HY57V643220DTP-7

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 6001-6004		BTX1042

RESISTORS

Mark	No.	Description	Part No.
	R 6001,6002,6004,6010		BCN1070
	R 6003,6005-6007,6009		BCN1067
	R 6008		BCN1071
	R 6011-6017,6026		BCN1067
	R 6018-6025		BCN1077
	R 6027		ACN1246
	R 6046,6048		RAB4CQ0R0J
	R 6047,6049		RAB4CQ470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 6002,6007-6024		CKSSYF104Z16
	C 6040-6063		CKSSYF104Z16
	C 6064		ACG7046

• Block Name: M BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6201		TC74VHC08FTS1
	IC 6202		PEG121B

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 6202,6204,6206		BTX1042
⚠	F 6201,6205		CCG1162

RESISTORS

Mark	No.	Description	Part No.
	R 6201-6204		BCN1070
	R 6205		BCN1071
	R 6206-6214,6216		BCN1067
	R 6219-6222		ACN1246
	R 6287,6289,6291		RAB4CQ103J
	R 6288,6290		RAB4CQ101J
	R 6292		RAB4CQ220J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 6206		ACG7046
	C 6210-6241		CKSSYF104Z16

• Block Name: S BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6401		TC74VHC08FTS1
	IC 6402		PEG121B

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 6401,6402,6404		BTX1042
⚠	F 6403		CCG1162

RESISTORS

Mark	No.	Description	Part No.
	R 6401-6404		BCN1070
	R 6405		BCN1071
	R 6406-6410		BCN1067
	R 6411-6414		ACN1246
	R 6456-6458		RAB4CQ103J
	R 6459		RAB4CQ220J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 6404		ACG7046
	C 6406-6436		CKSSYF104Z16

• Block Name: FPGA BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6601		EP2C20F484C8N

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 6602-6604		BTX1042

RESISTORS

Mark	No.	Description	Part No.
	R 6601-6606,6610,6611		BCN1067
	R 6607-6609		ACN1251
	R 6660,6661		RAB4CQ470J
	R 6662		RAB4CQ680J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 6601-6645,6652-6654		CKSSYF104Z16
	C 6647-6650		CKSSYB102K50
	C 6651		ACG7046

• Block Name: RX BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 6801		SII9023CTU
	IC 6802,6803		BR24L02FJ-W
	Q 6801-6803		DTC124EUA
	Q 6804-6806		DTA124EUA
	Q 6808,6809		RN1902
	Q 6810,6811		HN1K02FU
	D 6801,6802		DAN202U
	D 6803		1SS301
	D 6809,6810		UDZS6R8(B)

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	F 6801		CCG1162
	JA 6801,6802	HDMI CONNECTOR	AKP1278
	X 6801		ASS1192
	CN6801	CONNECTOR 11P	AKP1299

RESISTORS

Mark	No. Description	Part No.
	R 6801-6803	BCN1067
	R 6846,6848	RS1/16S0R0J
	R 6852	RAB4CQ100J
	R 6853,6854	RAB4CQ470J
	Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No. Description	Part No.
	C 6801,6802	CCSSCH120J50
	C 6803,6804	DCH1201
	C 6806	ACG7046
	C 6807,6808,6810,6812	CKSSYF104Z16
	C 6809,6811,6813,6815	CCSSCH101J50
	C 6814,6816,6818	CKSSYF104Z16
	C 6817,6819,6827,6831	CCSSCH101J50
	C 6820-6826,6828-6830	CKSSYF104Z16
	C 6832-6834,6836,6838	CKSSYF104Z16
	C 6835,6837,6839,6841	CCSSCH101J50
	C 6840,6842,6844,6846	CKSSYF104Z16
	C 6843,6845,6847,6849	CCSSCH101J50
	C 6848,6850,6852,6854	CKSSYF104Z16
	C 6851,6853,6855,6860	CCSSCH101J50
	C 6856-6859,6861,6863	CKSSYF104Z16
	C 6862,6864,6866,6868	CCSSCH101J50
	C 6865,6867,6870,6872	CKSSYF104Z16
	C 6869,6871,6873,6875	CCSSCH101J50
	C 6874,6876,6878,6880	CKSSYF104Z16
	C 6877,6879,6887-6889	CCSSCH101J50

•Block Name: RX BLOCK

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC 7001	SII1169CTU-P
	IC 7002	SN74AHC2G66HDCT
	IC 7003,7004	BR24L02FJ-W
	Q 7001-7005	DTC124EUA
	Q 7007	DTA124EUA
	D 7001	DAN202U
	D 7002,7003	1SS302
	D 7004	UDZS6R8(B)

MISCELLANEOUS

Mark	No. Description	Part No.
⚠	L 7001	QTL1013
	CN7001 DVI SOCKET (24P)	AKP1250

RESISTORS

Mark	No. Description	Part No.
	R 7001-7003	BCN1067
	R 7024	RS1/16S3900F
	R 7038	RAB4CQ472J
	Other Resistors	RS1/16SS###J

CAPACITORS

Mark	No. Description	Part No.
	C 7001,7003,7004,7008	CCSRCH331J50
	C 7002,7005-7007	CKSRYB105K10
	C 7009	CCSRCH331J50
	C 7010-7017	CCSSCH820J50
	C 7018	DCH1201
	C 7019-7022	ACG7046
	C 7023-7040	CKSSYF104Z16

Unit Name: FHD POWER AMP ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC 8001	LA4625
	IC 8002	NJM7812FA
	IC 8003	NJM7809FA
	IC 8006	UPC4570G2-A
	IC 8007	NJW1183GK1
	Q 8001,8002,8005,8006	2SA1586
	Q 8003,8004	2SC4116
	Q 8007,8008	DTC124EUA

MISCELLANEOUS

Mark	No. Description	Part No.
	8001 AUDIO HEATSINK (F)	ANH1650
	8002-8005 SCREW	VBB30P100FNI
	KN8001,8002 WRAPPING TERMINAL	VNF1084
	CN8001 CONNECTOR	B3P-VH
	CN8003 PLUG(15P)	KM200NA15
	CN8004 CONNECTOR	B6B-EH

RESISTORS

Mark	No. Description	Part No.
	R 8001-8004	RS1/16S6801F
	R 8005-8008	RS1/16S3301F
	R 8053-8056,8058	RD1/2MMF2R2J
	Other Resistors	RS1/16S###J

CAPACITORS

Mark	No. Description	Part No.
	C 8001,8027,8039,8045	CEHAT101M16
	C 8002,8040,8062,8064	CKSRYB103K50
	C 8003,8004	CEHAT470M16
	C 8005,8006,8009,8010	CEHAT100M50
	C 8011-8016,8021,8023	CFTLA104J50
	C 8017,8020,8024-8026	CEHAT1R0M50
	C 8018	CKSRYB822K50
	C 8019	CFTLA334J50
	C 8022,8035	CKSRYB222K50
	C 8028,8058	CFTLA103J50
	C 8029,8033,8036	CFTLA104J50
	C 8031	CFTLA223J50
	C 8032,8034,8037,8038	CEHAT1R0M50
	C 8041,8042	CEHAT100M50
	C 8043,8044	CEHAT2R2M50
	C 8046	CEHAT220M50
	C 8047	CEHATR47M50
	C 8048,8067	CEHAT101M16
	C 8053-8056	CFTLA104J50
	C 8057	CEHAT472M25
	C 8059,8060	CEHAT4R7M50
	C 8061	CEHAT471M25
	C 8063	CEHAT331M16
	C 8068	CKSRYB103K50

Unit Name: FHD PRE AUDIO ASSY

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC 8201	R2S11002AFT
	IC 8202-8204	UPC4570G2
	IC 8205,8209	PCM1754DBQ
	IC 8206,8210	NJM12904V
	IC 8207	PCM1803DB

Mark	No.	Description	Part No.
	IC 8208		NJU26901E2
	Q 8201,8202		2SA1586
	Q 8203,8204,8211,8212		2SC4116
	Q 8213		DTA124EUA
	Q 8215,8216		HN1B04FU
	D 8201		UDZS2R4(B)

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 8211		BTH1111
	JA8201-8206	JACK	PKB1029
	X 8201	CRYSTAL	ASS1204
	CN8201	CONNECTOR 11P	AKM1359
	CN8202	PLUG(15P)	KM200NA15

RESISTORS

Mark	No.	Description	Part No.
	R 8241-8244,8334		RS1/16S222J
	R 8247,8248,8343-8346		RS1/16S102J
	R 8249-8252		RS1/16S473J
	R 8255,8256		RS1/16S272J
	R 8257,8258,8320,8321		RS1/16S223J
	R 8259-8262		RS1/16S3301F
	R 8263-8266		RS1/16S101J
	R 8267-8275,8325,8326		RS1/16S0R0J
	R 8280		RAB4CQ103J
	R 8281,8322		RAB4CQ470J
	R 8301,8302,8335,8336		RS1/16S182J
	R 8333		RS1/16S472J
	R 8349-8355		RS1/16S0R0J
	R 8356		RS1/16S470J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8201-8212,8221-8224		CKSRYB105K10
	C 8219,8234,8250,8253		CKSSYF104Z16
	C 8220,8277,8278,8307		DCH1165
	C 8235,8239,8285,8286		CKSRYB105K10
	C 8237,8287		CEHAT101M10
	C 8238,8272,8296,8298		ACG7046
	C 8254,8261,8263,8264		CKSSYF104Z16
	C 8255-8258		CEHAT100M50
	C 8262		CEHAT220M50
	C 8265-8268		CKSRYB102K50
	C 8269,8271,8283,8284		CKSSYF104Z16
	C 8270,8316		CEHAT101M16
	C 8274		ACG1122
	C 8279,8280		CCSRCH681J50
	C 8281,8282		CCSRCH181J50
	C 8289-8292,8317,8318		CKSRYB105K10
	C 8293,8294		CKSSYB681K50
	C 8295,8297,8299-8301		CKSSYF104Z16
	C 8302,8304,8305		ACG7046
	C 8303		CKSSYF104Z16
⚠	C 8306		CCSSCH221J50
	C 8308		DCH1165
	C 8309,8310		CKSSYB152K50
	C 8311,8312		CCSRCH331J50
	C 8313-8315		CKSSYB104K10

Unit Name: FHD SP LR1 ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 8402		ATF1206
	CN8401	3P TOP POST	B3B-EH
	CN8402	SPEAKER TERMINAL 2-P	AKE1041

RESISTORS

Mark	No.	Description	Part No.
	R 8404,8408		RD1/2MMF100J
	Other Resistors		RS1/16S###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8403,8404		CCSRCH101J50
	C 8405		CKSRYB332K50
	C 8406,8409,8410		CCSRCH221J50
	C 8407		CKSRYF473Z50
⚠	C 8411,8412		CCSRCH221J50

Unit Name: FHD SP LR2 ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	L 8502		ATF1206
	CN8501	3P TOP POST	B3B-EH
	CN8502	SPEAKER TERMINAL 2-P	AKE1041

RESISTORS

Mark	No.	Description	Part No.
	R 8504,8508		RD1/2MMF100J
	Other Resistors		RS1/16S###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8503,8504		CCSRCH101J50
	C 8505		CKSRYB332K50
	C 8506,8509,8510		CCSRCH221J50
	C 8507		CKSRYF473Z50
⚠	C 8511,8512		CCSRCH221J50

Unit Name: FHD LED ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	D 8601		TLRV1022
	D 8602		SML512BC4T

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN8601	L-PLUG(3P)	KM200NA3L

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16S###J

Unit Name: FHD FAN CONNECT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 8651,8652		DTC124EUA
	D 8651,8652		DAN202U

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16SS###J

Unit Name: FHD IR ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 8701		2SA1586
	D 8701		DA204U

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN8701	CONNECTOR	AKM1290
	U 8701	REMOTE RECEIVER UNIT	RPM7240-H5

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8701		CEVW470M6R3
	C 8702		CKSRYB103K50
	C 8703		CKSSYB102K50
	C 8704		CKSSYF104Z16

Unit Name: FHD KEY ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
	S 8751-8755,8757-8761		VSG1024
	CN8751	8P CONNECTER	AKM1207

Unit Name: FHD KEY CONTROL ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 8801		PD5719A
	Q 8801		2SC4116
	D 8801-8803,8805-8808		1SS302
	D 8804		1SS355

MISCELLANEOUS

Mark	No.	Description	Part No.
⚠	F 8801-8808		CTF1410
	X 8801	CERALOCK	ASS1162
	CN8802	8P CONNECTER	AKM1207

RESISTORS

Mark	No.	Description	Part No.
	R 8808		RAB4C182J
	Other Resistors		RS1/16S###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8801,8802		CKSRYB472K50
⚠	C 8803		CKSRYB472K50
	C 8804		CKSSYF104Z16
	C 8805		CEVW470M6R3
⚠	C 8806-8808		CCSRCH101J50

Unit Name: FHD RS232C+SR ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
	8851	SCREW TERMINAL	VNE1949

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 8851		TC74VHC00FTS1
	IC 8852		MM1522XU
	IC 8853		MAX3232CPW
	IC 8854		TC74VHC125FTS1
	Q 8851,8852		2SA1586
	Q 8853,8854,8856		DTC124EUA
	D 8851-8854		1SS355

MISCELLANEOUS

Mark	No.	Description	Part No.
	JA8852	MINI JACK(4P)	AKN1073
	JA8853	JACK	RKN1004
	CN8852	PLUG(6P)	KM200NA6
	CN8853	9P D-SUB SOCKET	AKP1213

RESISTORS

Mark	No.	Description	Part No.
	R 8881-8889		RS1/16S0R0J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 8851-8855,8857,8858		CKSSYF104Z16
	C 8856,8859		CEHVKW100M16
	C 8860		CKSSYF104Z16
	C 8861		CKSRYB103K50

Unit Name: FHD DIGITAL ASSY

MISCELLANEOUS

• Block Name: LVDS RX BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 3001,3002		THC63LVD104S
	IC 3003		MM1562FF
	Q 3001		DTC143EUA
	D 3001		1SS355

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 3001-3004		QTL1013
	F 3003-3014		ATF1209
	CN3001,3002	31P CONNECTER	AKM1239

RESISTORS

Mark	No.	Description	Part No.
	R 3001-3018		RAB4C220J
	R 3019-3021,3023-3025		RS1/16SS1000F
	R 3027-3029,3031-3033		RS1/16SS1000F
	R 3048,3050		RS1/16S0R0J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 3001-3006,3009-3011		CKSSYB104K10
	C 3007,3008,3012,3013		CKSRYB105K6R3
	C 3014-3016		CKSSYB104K10
	C 3017		CCSRCH471J50

• Block Name: ASIC VICTRIA BLOCK

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 3101		PEE004A

MISCELLANEOUS

Mark	No.	Description	Part No.
	L 3101-3105		QTL1013
	F 3101		CCG1162

RESISTORS

Mark	No.	Description	Part No.
	R 3113,3116,3118		RAB4C103J
	R 3129-3148		RAB4C220J
	Other Resistors		RS1/16SS###J

CAPACITORS

Mark	No.	Description	Part No.
	C 3101-3116,3127-3142		CKSSYB104K10
	C 3143-3146		CKSSYB102K50
	C 3147-3150		CKSSYB104K10

Mark	No. Description	Part No.

• Block Name: SQ ASIC-L BLOCK

SEMICONDUCTORS

	IC 3201	PEG122C

MISCELLANEOUS

	L 3201-3203	QTL1013
	F 3201,3202	CCG1162

RESISTORS

	R 3208,3212	RAB4C101J
	R 3214	RS1/16S5601F
	Other Resistors	RS1/16SS###J

CAPACITORS

	C 3201-3227	CKSSYB104K10
	C 3228-3231	ACH1396
	C 3232-3247	CKSRYB105K6R3

• Block Name: SQ ASIC-R BLOCK

SEMICONDUCTORS

	IC 3301	PEG122C

MISCELLANEOUS

	L 3301-3303	QTL1013
	F 3301,3302	CCG1162

RESISTORS

	R 3301-3306,3309-3311	RAB4C220J
	R 3308,3312	RAB4C101J
	R 3314	RS1/16S5601F
	Other Resistors	RS1/16SS###J

CAPACITORS

	C 3301-3316	CKSRYB105K6R3
	C 3317-3320	ACH1396
	C 3321-3347	CKSSYB104K10

• Block Name: ASIC FLASH BLOCK

SEMICONDUCTORS

	IC 3401	CY25561SXC
	IC 3402,3404	PST3628UR
	IC 3403,3415	PST3610UR
	IC 3405	SN74AHC08PW
	IC 3407,3408	TC7W126FU
	IC 3409,3410	AGC1014
	IC 3411,3412	SN74AHC541PW
	IC 3413,3414	TC74VCX541FT
	Q 3404,3405	HN1C01FU
	Q 3406,3407	RN1901
	Q 3408	DTC143EUA

MISCELLANEOUS

	L 3401	QTL1013
	X 3401 CRYSTAL OSCILLATOR	ASS1188
	CN3401 PLUG 15-P	AKM1232

RESISTORS

	R 3401,3461,3462	RAB4C472J
	R 3402,3403	RAB4C101J
	Other Resistors	RS1/16SS###J

Mark	No. Description	Part No.

CAPACITORS

	C 3401-3403,3426	CKSRYB472K50
	C 3405,3429-3431	CCSRCH471J50
	C 3406,3407	CKSSYB102K50
	C 3408-3410,3413-3425	CKSSYB104K10
	C 3428	ACH1357

• Block Name: CN BLOCK

SEMICONDUCTORS

	Q 3601,3602	DTC143EUA
	D 3601-3604	DAN202U
	D 3605-3608	1SS355

MISCELLANEOUS

	F 3601-3660	ATF1209
	CN3601-3614 40P CONNECTER	AKM1348

RESISTORS

	R 3601,3604,3606,3609	RAB4C222J
	R 3602,3605,3607	RAB4C101J
	R 3603,3608	RAB4C472J
	R 3610-3612	RAB4C101J
	Other Resistors	RS1/16SS###J

CAPACITORS

	C 3601-3620	CKSSYB102K50

• Block Name: MODULE UCOM BLOCK

SEMICONDUCTORS

	IC 3701	BR24L04FJ-W
	IC 3702	TC7W126FU
	IC 3703	AGC1015
	IC 3704	SN74AHC08PW
	IC 3705	TC74VCX08FT
	IC 3706	M62334FP
	IC 3707,3708	TC74VHC123AFTS1
	IC 3709,3710	SN74AHC541PW
	Q 3701	RN2901
	Q 3702	2SJ461A
	D 3702-3706,3713,3716	DAN202U
	D 3707,3708	SML-310MT
	D 3709-3712	1SS355
	D 3714	SML-311UT
	D 3715	SML512BC4T

MISCELLANEOUS

	X 3701	CSS1616
	CN3701 PLUG 8-P	AKM1225
	CN3702 CONNECTOR	AKM1276
	CN3703 CONNECTOR	AKM1278

RESISTORS

	R 3701,3703	RAB4C101J
	R 3702	RAB4C103J
	Other Resistors	RS1/16SS###J

CAPACITORS

	C 3701-3703,3726,3727	CKSRYB105K6R3
	C 3707	ACH1357
	C 3709-3711,3713-3723	CKSSYB104K10
	C 3712	CCSSCH101J50
	C 3725	CKSSYB104K10

Mark No.	Description	Part No.

• Block Name: DIGITAL DD CON BLOCK

MISCELLANEOUS

U 3801	AXY1138

RESISTORS

R 3801	RAB4C101J
R 3837,3838	RS1/16S0R0J
Other Resistors	RS1/16SS###J

CAPACITORS

C 3804	CKSSYB102K50

Unit Name: PANEL SENSOR ASSY

SEMICONDUCTORS

IC 3901	MM1522XU
IC 3902	BR24L02FJ-W
Q 3901	HN1B04FU

MISCELLANEOUS

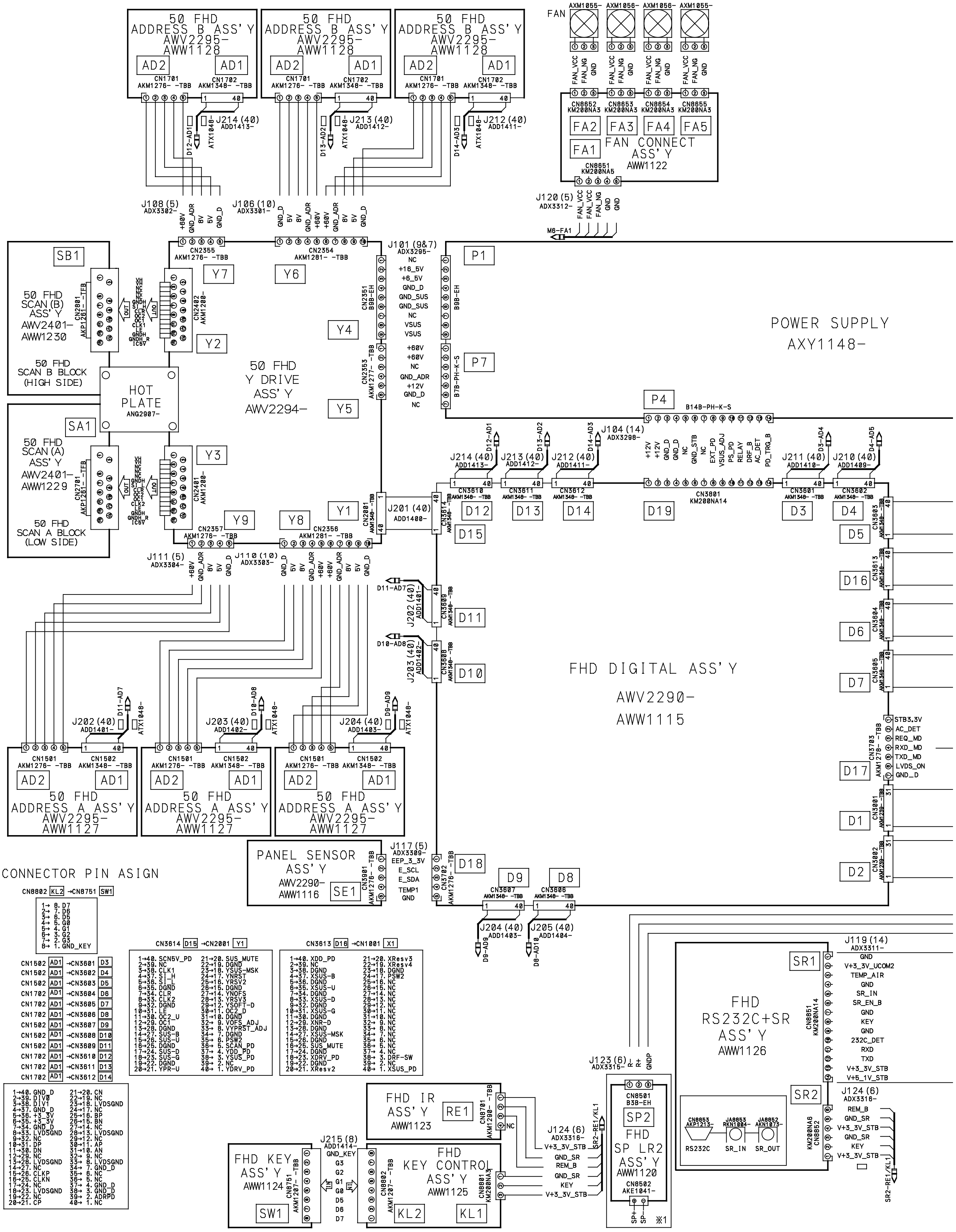
CN3901 CONNECTOR	AKM1276
All Resistors	RS1/16SS###J

CAPACITORS

C 3901,3902	CKSSYB104K10
C 3903,3904	CKSSYB103K16
C 3906,3907	CKSRYB105K6R3

4. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

4.1 OVERALL WIRING DIAGRAM


A
B
C
D
E
F
50 FHD ADDRESS B ASS'Y AWV2295- AWW1128
AD2
AD1
CN1701 AKM1276- -TBB
CN1702 AKM1348- -TBB
J214 (40) ADD1413-
J213 (40) ADD1412-
J212 (40) ADD1411-
D12-AD1
D13-AD2
D14-AD3
ATX1048-
FAN
AXM1055-
AXM1056-
FAN_VCC
FAN_NG
GND
CN8652 KM200NA3
CN8653 KM200NA3
CN8654 KM200NA3
CN8655 KM200NA3
FA1
FA2
FA3
FA4
FA5
FAN CONNECT ASS'Y AWW1122
CN8651 KM200NA5
J120 (5) ADX3312-
M6-FA1
J108 (5) ADX3302-
J106 (10) ADX3301-
+60V
GND_ADR
8V
5V
GND_D
CN2355 AKM1276- -TBB
CN2354 AKM1281- -TBB
J101 (9&7) ADX3295-
NC
+16_5V
+6_5V
GND_D
GND_SUS
VSUS
CN2351 B9B-EH
B9B-EH
P1
SB1
50 FHD SCAN (B) ASS'Y AWV2401- AWW1230
CN2801 AKP1261- -TFB
CN2402 AKM1280-
Y7
Y6
Y4
Y2
50 FHD SCAN B BLOCK (HIGH SIDE)
HOT PLATE ANG2907-
50 FHD Y DRIVE ASS'Y AWV2294-
POWER SUPPLY AXY1148-
CN2353 AKM1277- -TBB
+60V
+60V
NC
GND_ADR
+12V
GND_D
NC
B7B-PH-K-S
P7
Y5
P4
B14B-PH-K-S
SA1
50 FHD SCAN (A) ASS'Y AWV2401- AWW1229
CN2701 AKP1261- -TFB
CN2401 AKM1280-
Y3
50 FHD SCAN A BLOCK (LOW SIDE)
Y1
Y8
Y9
CN2001 AKM1348- -TBB
J201 (40) ADD1400-
CN3614 AKM1348-
CN2357 AKM1276- -TBB
CN2356 AKM1281- -TBB
J111 (5) ADX3304-
J110 (10) ADX3303-
J104 (14) ADX3298-
+12V
+12V
GND_D
GND_D
NC
GND_STB
NC
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRG_B
D12-AD1
D13-AD2
D14-AD3
D3-AD4
D4-AD5
J211 (40) ADD1410-
J210 (40) ADD1409-
CN3610 AKM1348- -TBB
CN3611 AKM1348- -TBB
CN3612 AKM1348- -TBB
CN3801 KM200NA14
CN3601 AKM1348- -TBB
CN3602 AKM1348- -TBB
D12
D13
D14
D19
D3
D4
D15
D5
CN3603 AKM1348- -TBB
CN3613 AKM1348- -TBB
D16
CN3604 AKM1348- -TBB
D6
D11-AD7
J202 (40) ADD1401-
CN3609 AKM1348- -TBB
D11
D10-AD8
J203 (40) ADD1402-
CN3608 AKM1348- -TBB
D10
FHD DIGITAL ASS'Y AWV2290- AWW1115
CN3605 AKM1348- -TBB
D7
CN3703 AKM1278- -TBB
STB3.3V
AC_DET
REQ_MD
RXD_MD
TXD_MD
LVDS_ON
GND_D
D17
CN3001 AKM1239- -TBB
D1
CN3002 AKM1239- -TBB
D2
J202 (40) ADD1401-
J203 (40) ADD1402-
J204 (40) ADD1403-
D11-AD7
D10-AD8
D9-AD9
CN1501 AKM1276- -TBB
CN1502 AKM1348- -TBB
50 FHD ADDRESS A ASS'Y AWV2295- AWW1127
PANEL SENSOR ASS'Y AWV2290- AWW1116
SE1
CN3901 AKM1276- -TBB
J117 (5) ADX3309-
EEP_3_3V
E_SCL
E_SDA
TEMP1
GND
CN3702 AKM1276- -TBB
D18
D9
D8
CN3607 AKM1348- -TBB
CN3606 AKM1348- -TBB
J204 (40) ADD1403-
J205 (40) ADD1404-
D9-AD9
D8-AD10
J119 (14) ADX3311-
SR1
GND
V+3_3V_UCOM2
TEMP_AIR
GND
SR_IN
SR_EN_B
GND
KEY
GND
232C_DET
RXD
TXD
V+3_3V_STB
V+5_1V_STB
CN8851 KM200NA14
FHD RS232C+SR ASS'Y AWW1126
CN8853 AKP1213-
JA8853 RKN1004-
JA8852 AKN1073-
RS232C
SR_IN
SR_OUT
SR2
CN8852 KM200NA6
J124 (6) ADX3316-
REM_B
GND_SR
V+3_3V_STB
GND_SR
KEY
V+3_3V_STB
SR2-RE1/KL1
J123 (6) ADX3315-
R-
R+
GNDP
CN8501 B3B-EH
SP2
FHD SP LR2 ASS'Y AWW1120
CN8502 AKE1041-
SP+
SP-
※1
FHD IR ASS'Y AWW1123
RE1
CN8701 AKM1290- -TBB
NC
J124 (6) ADX3316-
V+3_3V_STB
GND_SR
REM_B
GND_SR
KEY
V+3_3V_STB
SR2-RE1/KL1
J215 (8) ADD1414-
GND_KEY
G3
G2
G1
G0
D5
D6
D7
FHD KEY ASS'Y AWW1124
SW1
CN8751 AKM1207- -TBB
FHD KEY CONTROL ASS'Y AWW1125
CN8802 AKM1207- -TBB
CN8801 KM200NA3
KL2
KL1

CONNECTOR PIN ASIGN

CN8802 KL2 →CN8751 SW1

1→ 8. D7
2→ 7. D6
3→ 6. D5
4→ 5. G0
5→ 4. G1
6→ 3. G2
7→ 2. G3
8→ 1. GND_KEY

CN1502 AD1 →CN3601 D3
CN1502 AD1 →CN3602 D4
CN1502 AD1 →CN3603 D5
CN1702 AD1 →CN3604 D6
CN1702 AD1 →CN3605 D7
CN1702 AD1 →CN3606 D8
CN1502 AD1 →CN3607 D9
CN1502 AD1 →CN3608 D10
CN1502 AD1 →CN3609 D11
CN1702 AD1 →CN3610 D12
CN1702 AD1 →CN3611 D13
CN1702 AD1 →CN3612 D14

1→40. GND_D
2→39. DIV0
3→38. DIV1
4→37. GND_D
5→36. +3_3V
6→35. +3_3V
7→34. GND_D
8→33. LVDSGND
9→32. NC
10→31. DP
11→30. DN
12→29. NC
13→28. LVDSGND
14→27. NC
15→26. CLKP
16→25. CLKN
17→24. NC
18→23. LVDSGND
19→22. NC
20→21. CP
21→20. CN
22→19. NC
23→18. LVDSGND
24→17. NC
25→16. BP
26→15. BN
27→14. NC
28→13. LVDSGND
29→12. NC
30→11. AP
31→10. AN
32→ 9. NC
33→ 8. LVDSGND
34→ 7. GND_D
35→ 6. NC
36→ 5. NC
37→ 4. GND_D
38→ 3. GND_D
39→ 2. ADRPD
40→ 1. NC

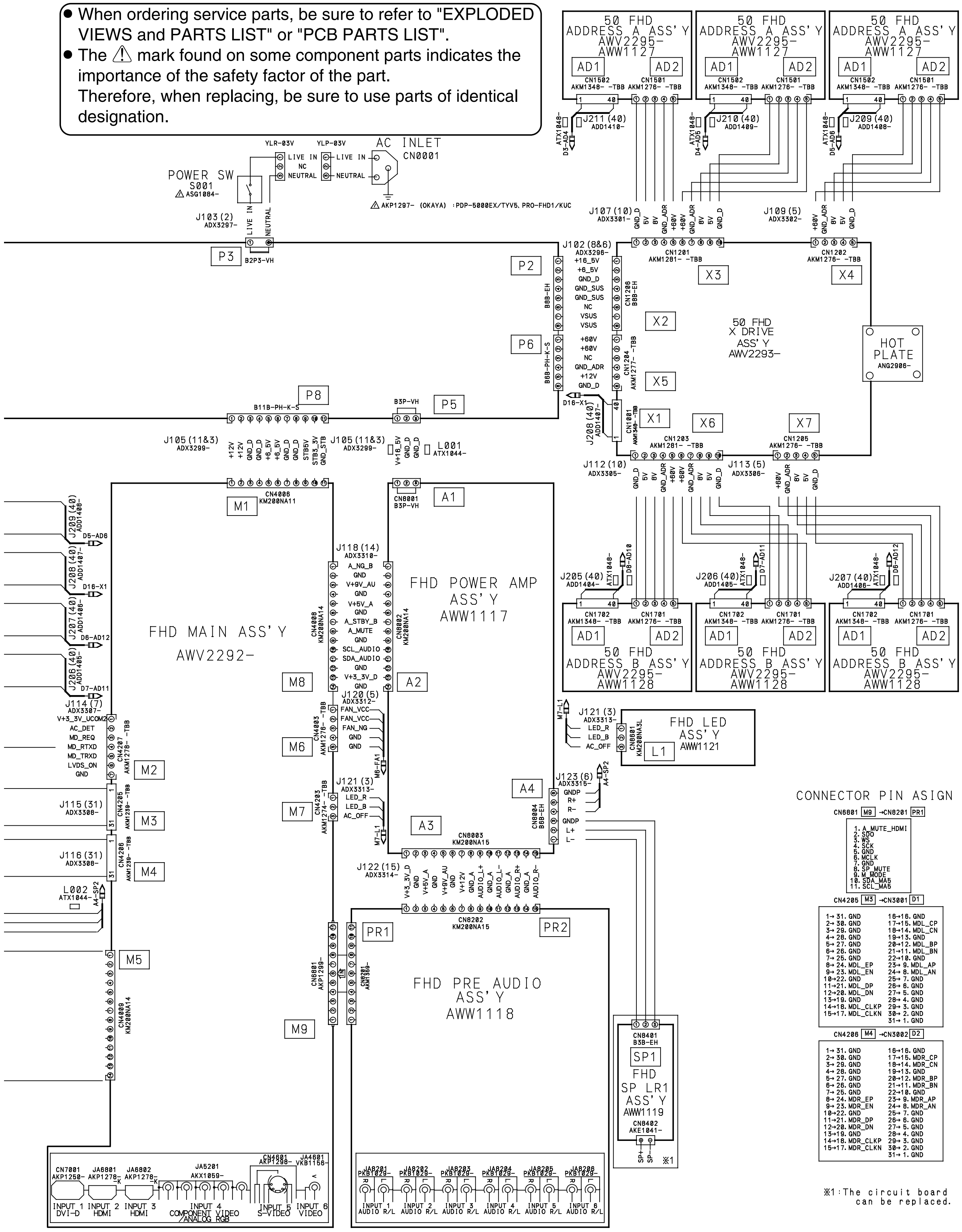
CN3614 D15 →CN2001 Y1

1→40. SCN5V_PD
2→39. NC
3→38. CLK1
4→37. SI_H
5→36. SI_L
6→35. DGND
7→34. CLR
8→33. CLK2
9→32. DGND
10→31. LE
11→30. OC2_U
12→29. OC1
13→28. DGND
14→27. SUS-B
15→26. SUS-U
16→25. DGND
17→24. SUS-D
18→23. SUS-G
19→22. DGND
20→21. YPR-U
21→20. SUS_MUTE
22→19. DGND
23→18. YSUS-MSK
24→17. YNRST
25→16. YRSV2
26→15. DGND
27→14. YNOFS
28→13. YRSV3
29→12. YSOFT-D
30→11. OC2_D
31→10. DGND
32→ 9. VOFS_ADJ
33→ 8. VYPRST_ADJ
34→ 7. DGND
35→ 6. PSW2
36→ 5. SCAN_PD
37→ 4. YDD_PD
38→ 3. YSUS_PD
39→ 2. NC
40→ 1. YDRV_PD

CN3613 D16 →CN1001 X1

1→40. XDD_PD
2→39. NC
3→38. DGND
4→37. XSUS-B
5→36. DGND
6→35. XSUS-U
7→34. DGND
8→33. XSUS-D
9→32. DGND
10→31. XSUS-G
11→30. DGND
12→29. XNR-D
13→28. DGND
14→27. XSUS-MSK
15→26. DGND
16→25. SUS_MUTE
17→24. DGND
18→23. XDRV_PD
19→22. DGND
20→21. XResv2
21→20. XResv3
22→19. XResv4
23→18. DGND
24→17. PSW2
25→16. NC
26→15. NC
27→14. NC
28→13. NC
29→12. NC
30→11. NC
31→10. NC
32→ 9. NC
33→ 8. NC
34→ 7. NC
35→ 6. NC
36→ 5. NC
37→ 4. NC
38→ 3. DRF-SW
39→ 2. NC
40→ 1. XSUS_PD

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
  Therefore, when replacing, be sure to use parts of identical designation.


50 FHD ADDRESS A ASS'Y AWV2295- AWW1127
AD1
AD2
CN1502 AKM1348- -TBB
CN1501 AKM1276- -TBB
J211 (40) ADD1410-
J210 (40) ADD1409-
J209 (40) ADD1408-
ATX1048-
D3-AD4
D4-AD5
D5-AD6
YLR-03V
YLP-03V
AC INLET
CN0001
LIVE IN
NC
NEUTRAL
POWER SW
S001
⚠ ASG1084-
⚠ AKP1297- (OKAYA) : PDP-5000EX/TYV5, PRO-FHD1/KUC
J103 (2) ADX3297-
P3
B2P3-VH
J107 (10) ADX3301-
J109 (5) ADX3302-
GND_D
5V
8V
GND_ADR
+60V
J102 (8&6) ADX3298-
+16_5V
+6_5V
GND_SUS
VSUS
+12V
B8B-EH
B6B-PH-K-S
CN1206 B8B-EH
CN1204 AKM1277- -TBB
CN1201 AKM1281- -TBB
CN1202 AKM1276- -TBB
P2
P6
X1
X2
X3
X4
X5
X6
X7
50 FHD X DRIVE ASS'Y AWV2293-
HOT PLATE ANG2906-
D16-X1
CN1001 AKM1348- -TBB
J208 (40) ADD1407-
CN1203 AKM1281- -TBB
CN1205 AKM1276- -TBB
J112 (10) ADX3305-
J113 (5) ADX3306-
P8
B11B-PH-K-S
B3P-VH
P5
J105 (11&3) ADX3299-
+12V
GND_D
+6_5V
STB6V
STB3_3V
GND_STB
V+16_5V
L001 ATX1044-
CN4006 KM200NA11
M1
CN8001 B3P-VH
A1
J209 (40) ADD1408-
D5-AD6
J208 (40) ADD1407-
J207 (40) ADD1406-
D6-AD12
J206 (40) ADD1405-
D7-AD11
FHD MAIN ASS'Y AWV2292-
J118 (14) ADX3310-
A_NG_B
GND
V+9V_AU
V+5V_A
A_STBY_B
A_MUTE
SCL_AUDIO
SDA_AUDIO
V+3_3V_D
CN4008 KM200NA14
CN8002 KM200NA14
FHD POWER AMP ASS'Y AWW1117
J205 (40) ADD1404-
J206 (40) ADD1405-
J207 (40) ADD1406-
D6-AD10
D7-AD11
D6-AD12
CN1702 AKM1348- -TBB
CN1701 AKM1276- -TBB
50 FHD ADDRESS B ASS'Y AWV2295- AWW1128
M8
A2
J114 (7) ADX3307-
V+3_3V_UCOM2
AC_DET
MD_REQ
MD_RTXD
MD_TRXD
LVDS_ON
CN4207 AKM1278- -TBB
M2
J120 (5) ADX3312-
FAN_VCC
FAN_NG
CN4003 AKM1276- -TBB
M6
M6-FA1
J121 (3) ADX3313-
LED_R
LED_B
AC_OFF
M7-L1
FHD LED ASS'Y AWW1121
CN8801 KM200NA3L
L1
J115 (31) ADX3308-
CN4205 AKM1239- -TBB
M3
J116 (31) ADX3308-
CN4206 AKM1239- -TBB
M4
L002 ATX1044-
A4-SP2
CN4203 AKM1274- -TBB
M7
A3
A4
J123 (6) ADX3316-
GNDP
R+
R-
L+
L-
CN8004 B6B-EH
CN8003 KM200NA15
J122 (15) ADX3314-
V+5V_A
V+9V_AU
V+12V
GND_A
AUDIO_L+
AUDIO_L-
AUDIO_R+
AUDIO_R-
CN8202 KM200NA15
PR1
PR2
M5
CN4009 KM200NA14
CN6801 AKP1298-
CN8201 AKM1350-
M9
FHD PRE AUDIO ASS'Y AWW1118
CN8401 B3B-EH
SP1
FHD SP LR1 ASS'Y AWW1119
CN8402 AKE1041-
SP+
SP-
※1
CN7001 AKP1250-
JA6801 AKP1278-
JA6802 AKP1278-
JA5201 AKX1059-
CN4601 AKP1298-
JA4601 VKB1156-
INPUT 1 DVI-D
INPUT 2 HDMI
INPUT 3 HDMI
INPUT 4 COMPONENT VIDEO /ANALOG RGB
INPUT 5 S-VIDEO
INPUT 6 VIDEO
JA8201 PKB1029-
JA8202 PKB1029-
JA8203 PKB1029-
JA8204 PKB1029-
JA8205 PKB1029-
JA8206 PKB1029-
INPUT 1 AUDIO R/L
INPUT 2 AUDIO R/L
INPUT 3 AUDIO R/L
INPUT 4 AUDIO R/L
INPUT 5 AUDIO R/L
INPUT 6 AUDIO R/L

CONNECTOR PIN ASIGN

CN6801 M9 →CN8201 PR1

1. A_MUTE_HDMI
2. SDO
3. WS
4. SCK
5. GND
6. MCLK
7. GND
8. SP_MUTE
9. M_MODE
10. SDA_MA5
11. SCL_MA5

CN4205 M3 →CN3001 D1

1→ 31. GND
2→ 30. GND
3→ 29. GND
4→ 28. GND
5→ 27. GND
6→ 26. GND
7→ 25. GND
8→ 24. MDL_EP
9→ 23. MDL_EN
10→22. GND
11→21. MDL_DP
12→20. MDL_DN
13→19. GND
14→18. MDL_CLKP
15→17. MDL_CLKN
16→16. GND
17→15. MDL_CP
18→14. MDL_CN
19→13. GND
20→12. MDL_BP
21→11. MDL_BN
22→10. GND
23→ 9. MDL_AP
24→ 8. MDL_AN
25→ 7. GND
26→ 6. GND
27→ 5. GND
28→ 4. GND
29→ 3. GND
30→ 2. GND
31→ 1. GND

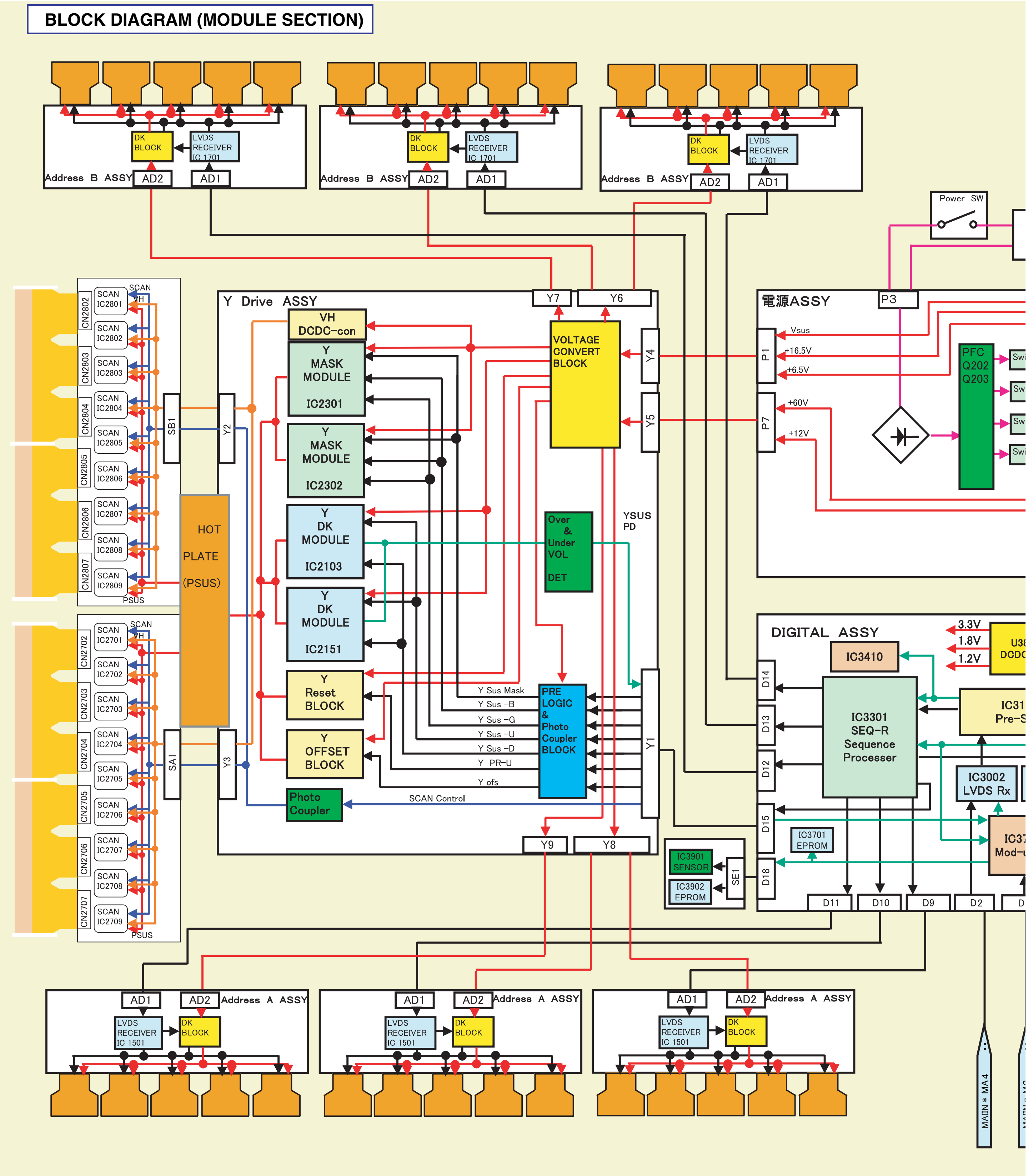
CN4206 M4 →CN3002 D2

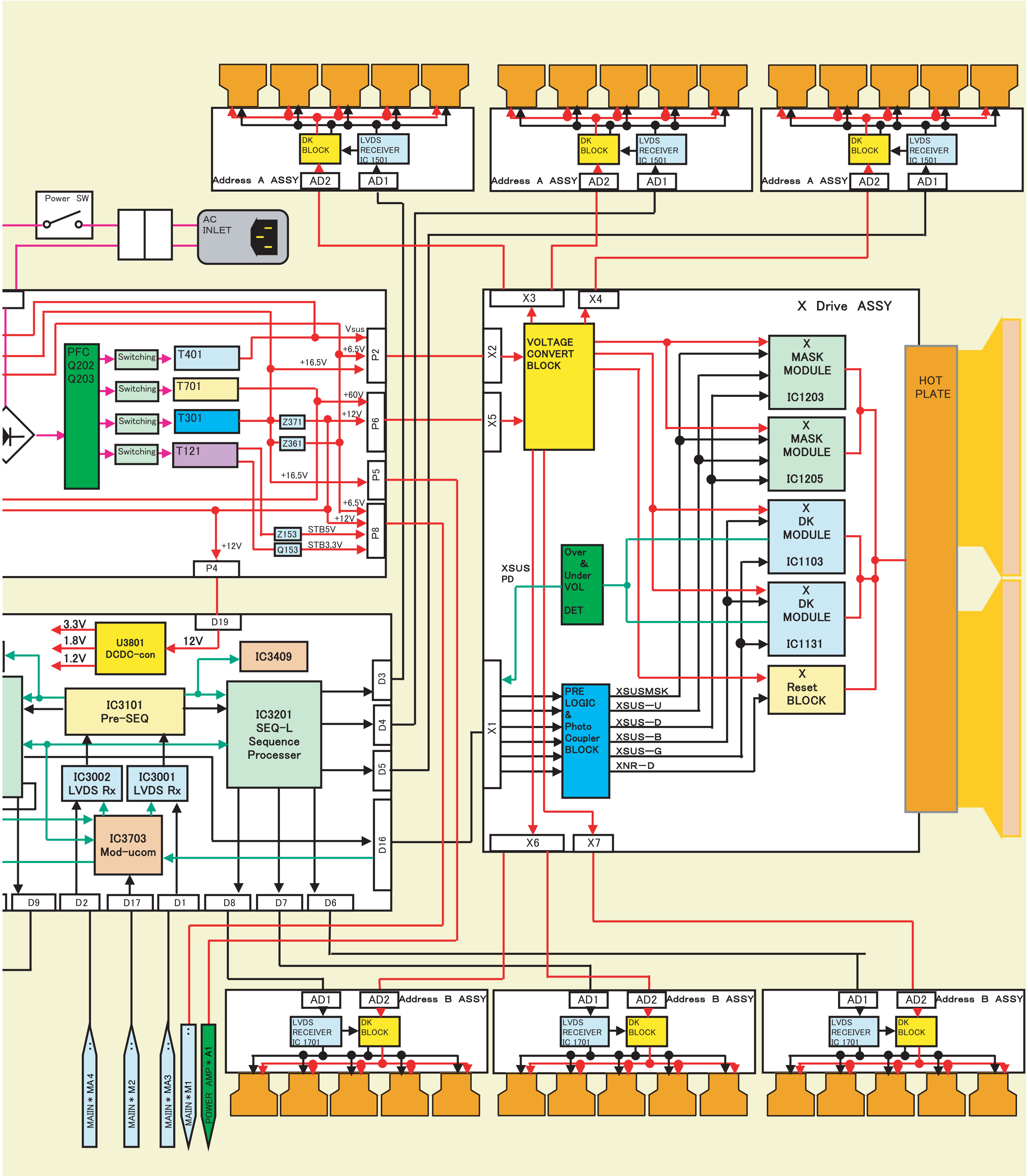
1→ 31. GND
2→ 30. GND
3→ 29. GND
4→ 28. GND
5→ 27. GND
6→ 26. GND
7→ 25. GND
8→ 24. MDR_EP
9→ 23. MDR_EN
10→22. GND
11→21. MDR_DP
12→20. MDR_DN
13→19. GND
14→18. MDR_CLKP
15→17. MDR_CLKN
16→16. GND
17→15. MDR_CP
18→14. MDR_CN
19→13. GND
20→12. MDR_BP
21→11. MDR_BN
22→10. GND
23→ 9. MDR_AP
24→ 8. MDR_AN
25→ 7. GND
26→ 6. GND
27→ 5. GND
28→ 4. GND
29→ 3. GND
30→ 2. GND
31→ 1. GND

※1 : The circuit board can be replaced.

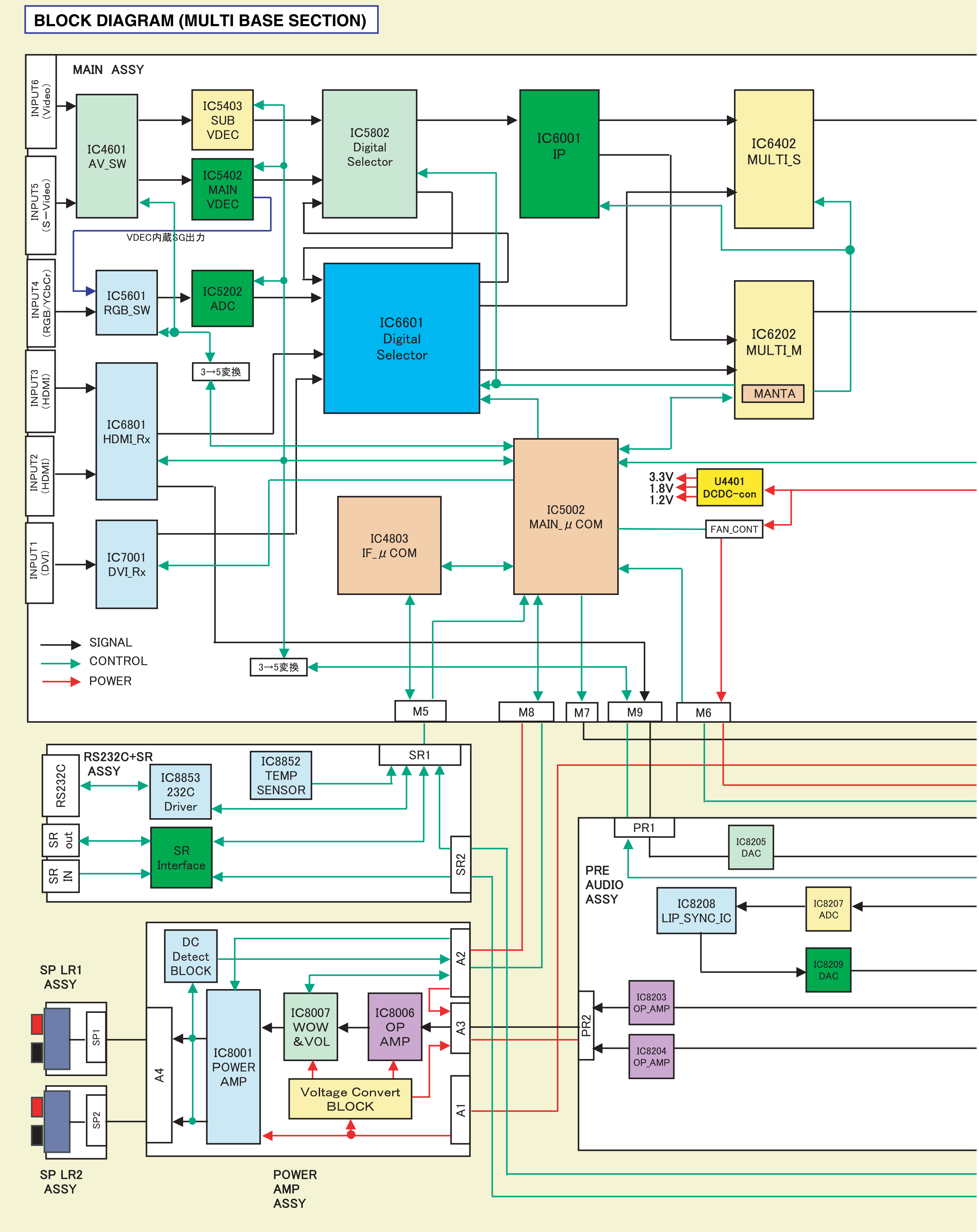
4.2 OVERALL BLOCK DIAGRAM

4.2.1 MODULE SECTION


BLOCK DIAGRAM (MODULE SECTION)
DK BLOCK
LVDS RECEIVER IC 1701
Address B ASSY
AD2
AD1
Power SW
SCAN VH
SCAN IC2801
SCAN IC2802
SCAN IC2803
SCAN IC2804
SCAN IC2805
SCAN IC2806
SCAN IC2807
SCAN IC2808
SCAN IC2809
CN2802
CN2803
CN2804
CN2805
CN2806
CN2807
PSUS
SB1
SCAN IC2701
SCAN IC2702
SCAN IC2703
SCAN IC2704
SCAN IC2705
SCAN IC2706
SCAN IC2707
SCAN IC2708
SCAN IC2709
CN2702
CN2703
CN2704
CN2705
CN2706
CN2707
SA1
HOT PLATE (PSUS)
Y Drive ASSY
Y2
Y3
Y7
Y6
Y4
Y5
Y1
Y9
Y8
VH DCDC-con
Y MASK MODULE IC2301
Y MASK MODULE IC2302
Y DK MODULE IC2103
Y DK MODULE IC2151
Y Reset BLOCK
Y OFFSET BLOCK
Photo Coupler
VOLTAGE CONVERT BLOCK
Over & Under VOL DET
YSUS PD
PRE LOGIC & Photo Coupler BLOCK
Y Sus Mask
Y Sus -B
Y Sus -G
Y Sus -U
Y Sus -D
Y PR-U
Y ofs
SCAN Control
電源ASSY
P3
P1
P7
Vsus
+16.5V
+6.5V
+60V
+12V
PFC Q202 Q203
Swi
Sw
Sw
Swi
DIGITAL ASSY
3.3V
1.8V
1.2V
U3
DCDC
IC3410
IC3301 SEQ-R Sequence Processer
IC31 Pre-S
IC3002 LVDS Rx
IC37 Mod-
IC3701 EPROM
IC3901 SENSOR
IC3902 EPROM
SE1
D14
D13
D12
D15
D18
D11
D10
D9
D2
D
Address A ASSY
AD1
AD2
LVDS RECEIVER IC 1501
DK BLOCK
MAIN＊MA4
MAIN＊MA

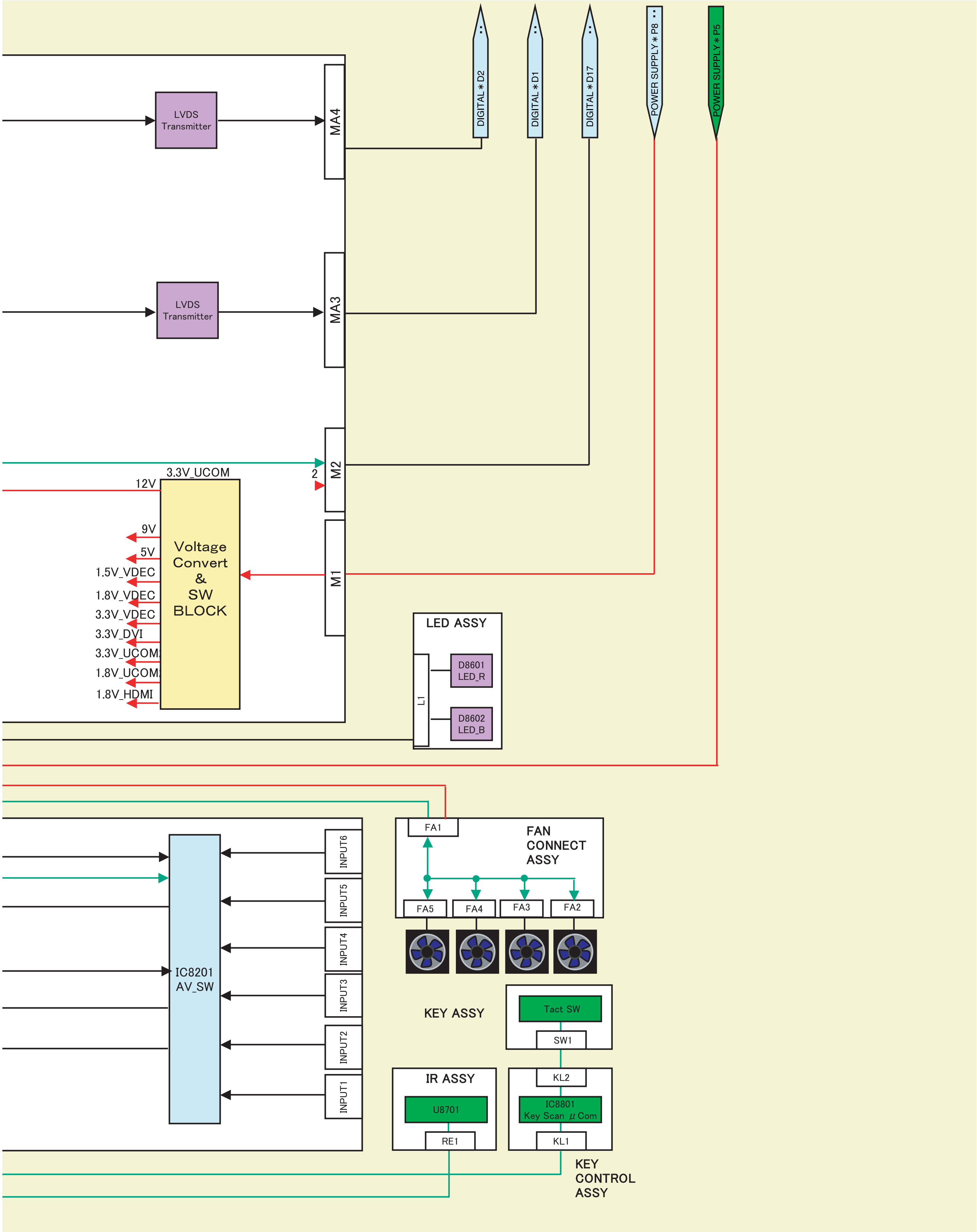

Address A ASSY
DK BLOCK
LVDS RECEIVER IC 1501
AD2
AD1
Power SW
AC INLET
X Drive ASSY
X3
X4
X2
X5
X1
X6
X7
VOLTAGE CONVERT BLOCK
X MASK MODULE IC1203
X MASK MODULE IC1205
X DK MODULE IC1103
X DK MODULE IC1131
X Reset BLOCK
HOT PLATE
XSUS PD
Over & Under VOL DET
PRE LOGIC & Photo Coupler BLOCK
XSUSMSK
XSUS−U
XSUS−D
XSUS−B
XSUS−G
XNR−D
PFC Q202 Q203
Switching
T401
T701
T301
T121
Vsus
+6.5V
+16.5V
+60V
+12V
Z371
Z361
+16.5V
+6.5V
+12V
Z153
Q153
STB5V
STB3.3V
+12V
P2
P6
P5
P8
P4
D19
3.3V
1.8V
1.2V
U3801 DCDC-con
12V
IC3409
IC3101 Pre-SEQ
IC3201 SEQ−L Sequence Processer
IC3002 LVDS Rx
IC3001 LVDS Rx
IC3703 Mod−ucom
D3
D4
D5
D16
D9
D2
D17
D1
D8
D7
D6
Address B ASSY
LVDS RECEIVER IC 1701
MAIN＊MA4
MAIN＊M2
MAIN＊MA3
MAIN＊M1
POWER AMP＊A1

4.2.2 MULTI BASE SECTION

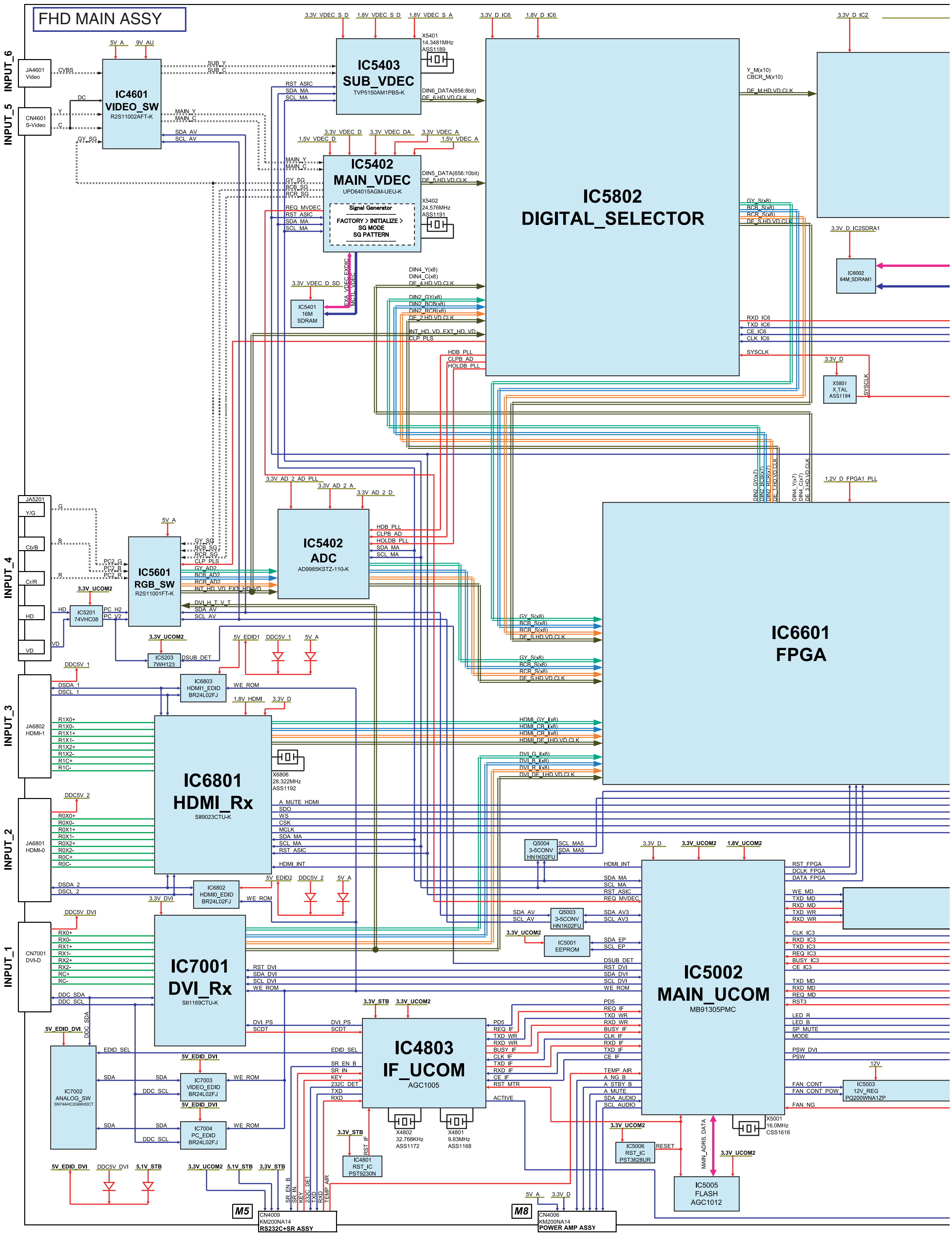


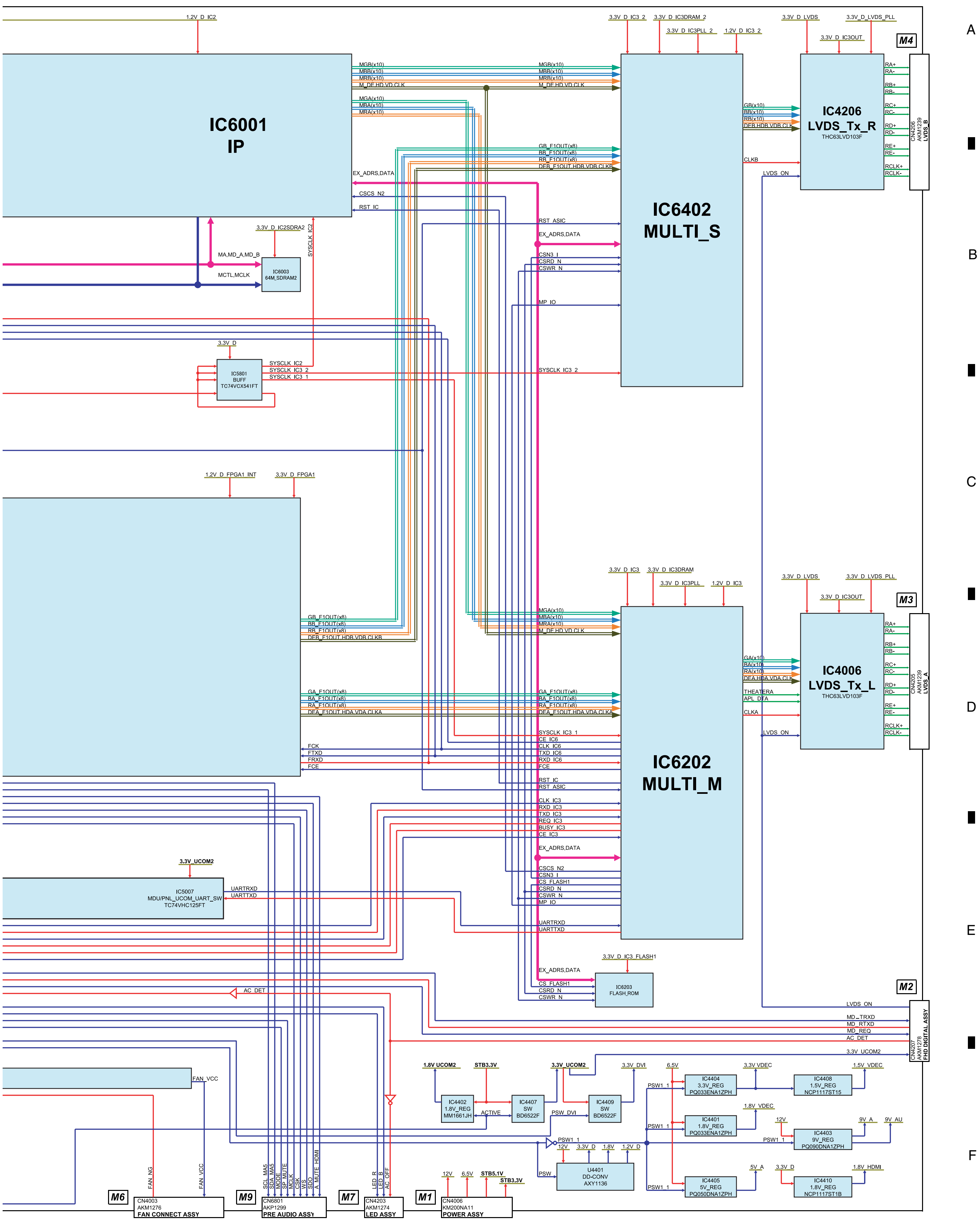
BLOCK DIAGRAM (MULTI BASE SECTION)

MAIN ASSY
INPUT6 (Video)
INPUT5 (S−Video)
INPUT4 (RGB/YCbCr)
INPUT3 (HDMI)
INPUT2 (HDMI)
INPUT1 (DVI)
IC4601 AV_SW
IC5403 SUB VDEC
IC5402 MAIN VDEC
VDEC内蔵SG出力
IC5802 Digital Selector
IC6001 IP
IC6402 MULTI_S
IC5601 RGB_SW
IC5202 ADC
3→5変換
IC6601 Digital Selector
IC6202 MULTI_M
MANTA
IC6801 HDMI_Rx
IC5002 MAIN_μ COM
3.3V
1.8V
1.2V
U4401 DCDC−con
FAN_CONT
IC4803 IF_μ COM
IC7001 DVI_Rx
SIGNAL
CONTROL
POWER
3→5変換
M5
M8
M7
M9
M6
RS232C+SR ASSY
RS232C
IC8853 232C Driver
IC8852 TEMP SENSOR
SR1
SR out
SR IN
SR Interface
SR2
PR1
IC8205 DAC
PRE AUDIO ASSY
IC8208 LIP_SYNC_IC
IC8207 ADC
IC8209 DAC
IC8203 OP_AMP
IC8204 OP_AMP
PR2
SP LR1 ASSY
SP1
SP2
SP LR2 ASSY
DC Detect BLOCK
A4
IC8001 POWER AMP
IC8007 WOW &VOL
IC8006 OP AMP
Voltage Convert BLOCK
A2
A3
A1
POWER AMP ASSY


DIGITAL＊D2
DIGITAL＊D1
DIGITAL＊D17
POWER SUPPLY＊P8
POWER SUPPLY＊P5
LVDS Transmitter
MA4
LVDS Transmitter
MA3
M2
3.3V_UCOM
2
12V
9V
5V
1.5V_VDEC
1.8V_VDEC
3.3V_VDEC
3.3V_DVI
3.3V_UCOM2
1.8V_UCOM2
1.8V_HDMI
Voltage Convert & SW BLOCK
M1
LED ASSY
L1
D8601 LED_R
D8602 LED_B
FA1
FAN CONNECT ASSY
FA5
FA4
FA3
FA2
IC8201 AV_SW
INPUT6
INPUT5
INPUT4
INPUT3
INPUT2
INPUT1
KEY ASSY
Tact SW
SW1
IR ASSY
U8701
RE1
KL2
IC8801 Key Scan μCom
KL1
KEY CONTROL ASSY

4.3 FHD MAIN ASSY


FHD MAIN ASSY
INPUT_6
INPUT_5
INPUT_4
INPUT_3
INPUT_2
INPUT_1
JA4601 Video
CN4601 S-Video
CVBS
IC4601 VIDEO_SW R2S11002AFT-K
5V_A
9V_AU
SUB_Y
SUB_C
MAIN_Y
MAIN_C
SDA_AV
SCL_AV
GY_SG
3.3V_VDEC_S_D
1.8V_VDEC_S_D
1.8V_VDEC_S_A
IC5403 SUB_VDEC TVP5150AM1PBS-K
X5401 14.3481MHz ASS1189
RST_ASIC
SDA_MA
SCL_MA
DIN6_DATA(656:8bit)
DE_6.HD.VD.CLK
3.3V_VDEC_D
3.3V_VDEC_DA
3.3V_VDEC_A
1.5V_VDEC_D
1.5V_VDEC_A
IC5402 MAIN_VDEC UPD64015AGM-UEU-K
Signal Generator
FACTORY > INITIALIZE >
SG MODE
SG PATTERN
BCB_SG
RCR_SG
REQ_MVDEC
DIN5_DATA(656:10bit)
DE_5.HD.VD.CLK
X5402 24.576MHz ASS1191
EXA_VDEC-EXDIC
MCTL_VDEC
3.3V_VDEC_D_SD
IC5401 16M SDRAM
3.3V_D_IC6
1.8V_D_IC6
IC5802 DIGITAL_SELECTOR
DIN4_Y(x8)
DIN4_C(x8)
DE_4.HD.VD.CLK
DIN2_GY(x8)
DIN2_BCB(x8)
DIN2_RCR(x8)
DE_2.HD.VD.CLK
INT_HD_VD_EXT_HD_VD
CLP_PLS
HDB_PLL
CLPB_AD
HOLDB_PLL
Y_M(x10)
CBCR_M(x10)
DE_M.HD.VD.CLK
GY_S(x8)
BCB_S(x8)
RCR_S(x8)
DE_S.HD.VD.CLK
RXD_IC6
TXD_IC6
CE_IC6
CLK_IC6
SYSCLK
3.3V_D_IC2
3.3V_D_IC2SDRA1
IC6002 64M_SDRAM1
3.3V_D
X5801 X_TAL ASS1194
1.2V_D_FPGA1_PLL
DIN2_GY(x7)
DIN2_BCB(x7)
DIN2_RCR(x7)
DE_1.HD.VD.CLK
DIN4_Y(x7)
DIN4_C(x7)
DE_3.HD.VD.CLK
JA5201
Y/G
Cb/B
Cr/R
HD
VD
3.3V_AD_2_AD_PLL
3.3V_AD_2_A
3.3V_AD_2_D
IC5402 ADC AD9985KSTZ-110-K
5V_A
IC5601 RGB_SW R2S11001FT-K
PC2_G
PC2_B
PC2_R
GY_AD2
BCB_AD2
RCR_AD2
INT_HD_VD_EXT_HD/VD
DVI_H_T_V_T
3.3V_UCOM2
IC5201 74VHC08
PC_H2
PC_V2
IC5203 7WH123
DSUB_DET
5V_EDID1
DDC5V_1
IC6601 FPGA
HDMI_GY_I(x8)
HDMI_CB_I(x8)
HDMI_CR_I(x8)
HDMI_DE_I.HD.VD.CLK
DVI_G_I(x8)
DVI_B_I(x8)
DVI_R_I(x8)
DVI_DE_I.HD.VD.CLK
DDC5V_1
DSDA_1
DSCL_1
IC6803 HDMI1_EDID BR24L02FJ
WE_ROM
1.8V_HDMI
JA6802 HDMI-1
R1X0+
R1X0-
R1X1+
R1X1-
R1X2+
R1X2-
R1C+
R1C-
IC6801 HDMI_Rx SII9023CTU-K
X6806 28.322MHz ASS1192
A_MUTE_HDMI
SDO
WS
CSK
MCLK
HDMI_INT
DDC5V_2
JA6801 HDMI-0
R0X0+
R0X0-
R0X1+
R0X1-
R0X2+
R0X2-
R0C+
R0C-
DSDA_2
DSCL_2
IC6802 HDMI0_EDID BR24L02FJ
5V_EDID2
Q5004 3-5CONV HN1K02FU
SCL_MA5
SDA_MA5
3.3V_DVI
DDC5V_DVI
CN7001 DVI-D
RX0+
RX0-
RX1+
RX1-
RX2+
RX2-
RC+
RC-
DDC_SDA
DDC_SCL
IC7001 DVI_Rx SII1169CTU-K
RST_DVI
SDA_DVI
SCL_DVI
DVI_PS
SCDT
5V_EDID_DVI
IC7002 ANALOG_SW SN74AHC2G66HDCT
EDID_SEL
IC7003 VIDEO_EDID BR24L02FJ
IC7004 PC_EDID BR24L02FJ
5.1V_STB
3.3V_STB
IC4803 IF_UCOM AGC1005
SR_EN_B
SR_IN
KEY
232C_DET
TXD
RXD
X4802 32.768KHz ASS1172
X4801 9.83MHz ASS1168
IC4801 RST_IC PST9230N
RST_IF
PD5
REQ_IF
TXD_WR
RXD_WR
BUSY_IF
CLK_IF
TXD_IF
RXD_IF
CE_IF
RST_MTR
ACTIVE
Q5003 3-5CONV HN1K02FU
SDA_AV3
SCL_AV3
IC5001 EEPROM
SDA_EP
SCL_EP
1.8V_UCOM2
IC5002 MAIN_UCOM MB91305PMC
RST_FPGA
DCLK_FPGA
DATA_FPGA
WE_MD
TXD_MD
RXD_MD
TXD_WR
RXD_WR
CLK_IC3
RXD_IC3
TXD_IC3
REQ_IC3
BUSY_IC3
CE_IC3
REQ_MD
RST3
LED_R
LED_B
SP_MUTE
MODE
PSW_DVI
PSW
FAN_CONT
FAN_CONT_POW
FAN_NG
12V
IC5003 12V_REG PQ200WNA1ZP
TEMP_AIR
A_NG_B
A_STBY_B
A_MUTE
SDA_AUDIO
SCL_AUDIO
X5001 16.0MHz CSS1616
IC5006 RST_IC PST3628UR
RESET
MAIN_ADRS, DATA
IC5005 FLASH AGC1012
M5
CN4009 KM200NA14 RS232C+SR ASSY
M8
CN4006 KM200NA14 POWER AMP ASSY
1
2
3
4
A
B
C
D
E
F


A
B
C
D
E
F
1.2V_D_IC2
IC6001
IP
MGB(x10)
MBB(x10)
MRB(x10)
M_DE,HD,VD,CLK
MGA(x10)
MBA(x10)
MRA(x10)
EX_ADRS,DATA
CSCS_N2
RST_IC
3.3V_D_IC2SDRA2
SYSCLK_IC2
MA,MD_A,MD_B
MCTL,MCLK
IC6003
64M_SDRAM2
3.3V_D
IC5801
BUFF
TC74VCX541FT
SYSCLK_IC2
SYSCLK_IC3_2
SYSCLK_IC3_1
3.3V_D_IC3_2
3.3V_D_IC3DRAM_2
3.3V_D_IC3PLL_2
1.2V_D_IC3_2
GB_F1OUT(x8)
BB_F1OUT(x8)
RB_F1OUT(x8)
DEB_F1OUT,HDB,VDB,CLKB
RST_ASIC
EX_ADRS,DATA
CSN3_I
CSRD_N
CSWR_N
MP_IO
SYSCLK_IC3_2
IC6402
MULTI_S
GB(x10)
BB(x10)
RB(x10)
DEB,HDB,VDB,CLK
CLKB
LVDS_ON
3.3V_D_LVDS
3.3V_D_LVDS_PLL
3.3V_D_IC3OUT
M4
IC4206
LVDS_Tx_R
THC63LVD103F
RA+
RA-
RB+
RB-
RC+
RC-
RD+
RD-
RE+
RE-
RCLK+
RCLK-
CN4206
AKM1239
LVDS_B
1.2V_D_FPGA1_INT
3.3V_D_FPGA1
GB_F1OUT(x8)
BB_F1OUT(x8)
RB_F1OUT(x8)
DEB_F1OUT,HDB,VDB,CLKB
GA_F1OUT(x8)
BA_F1OUT(x8)
RA_F1OUT(x8)
DEA_F1OUT,HDA,VDA,CLKA
FCK
FTXD
FRXD
FCE
3.3V_D_IC3
3.3V_D_IC3DRAM
3.3V_D_IC3PLL
1.2V_D_IC3
MGA(x10)
MBA(x10)
MRA(x10)
M_DE,HD,VD,CLK
GA_F1OUT(x8)
BA_F1OUT(x8)
RA_F1OUT(x8)
DEA_F1OUT,HDA,VDA,CLKA
SYSCLK_IC3_1
CE_IC6
CLK_IC6
TXD_IC6
RXD_IC6
FCE
RST_IC
RST_ASIC
CLK_IC3
RXD_IC3
TXD_IC3
REQ_IC3
BUSY_IC3
CE_IC3
EX_ADRS,DATA
CSCS_N2
CSN3_I
CS_FLASH1
CSRD_N
CSWR_N
MP_IO
UARTRXD
UARTTXD
IC6202
MULTI_M
GA(x10)
BA(x10)
RA(x10)
DEA,HDA,VDA,CLK
THEATERA
APL_DEA
CLKA
LVDS_ON
3.3V_D_LVDS
3.3V_D_LVDS_PLL
3.3V_D_IC3OUT
M3
IC4006
LVDS_Tx_L
THC63LVD103F
RA+
RA-
RB+
RB-
RC+
RC-
RD+
RD-
RE+
RE-
RCLK+
RCLK-
CN4205
AKM1239
LVDS_A
3.3V_UCOM2
IC5007
MDU/PNL_UCOM_UART_SW
TC74VHC125FT
UARTRXD
UARTTXD
3.3V_D_IC3_FLASH1
EX_ADRS,DATA
CS_FLASH1
CSRD_N
CSWR_N
IC6203
FLASH_ROM
AC_DET
M2
LVDS_ON
MD_TRXD
MD_RTXD
MD_REQ
AC_DET
3.3V_UCOM2
CN4207
AKM1278
FHD DIGITAL ASSY
FAN_VCC
1.8V UCOM2
STB3.3V
IC4402
1.8V_REG
MM1661JH
ACTIVE
IC4407
SW
BD6522F
3.3V_UCOM2
PSW_DVI
IC4409
SW
BD6522F
3.3V_DVI
6.5V
PSW1_1
IC4404
3.3V_REG
PQ033ENA1ZPH
3.3V VDEC
IC4408
1.5V_REG
NCP1117ST15
1.5V_VDEC
1.8V_VDEC
IC4401
1.8V_REG
PQ033ENA1ZPH
12V
9V_A
9V_AU
IC4403
9V_REG
PQ090DNA1ZPH
PSW1_1
12V
3.3V_D
1.8V
1.2V_D
PSW
U4401
DD-CONV
AXY1136
5V_A
3.3V_D
1.8V_HDMI
IC4405
5V_REG
PQ050DNA1ZPH
IC4410
1.8V_REG
NCP1117ST1B
FAN_NG
FAN_VCC
M6
CN4003
AKM1276
FAN CONNECT ASSY
SCL_MA5
SDA_MA5
MODE
SP_MUTE
MCLK
CSK
WS
SDO
A_MUTE_HDMI
M9
CN6801
AKP1299
PRE AUDIO ASSY
LED_R
LED_B
AC_OFF
M7
CN4203
AKM1274
LED ASSY
12V
6.5V
STB5.1V
STB3.3V
M1
CN4006
KM200NA11
POWER ASSY

4.4 50FHD X DRIVE ASSY

A

50FHD X DRIVE ASSY

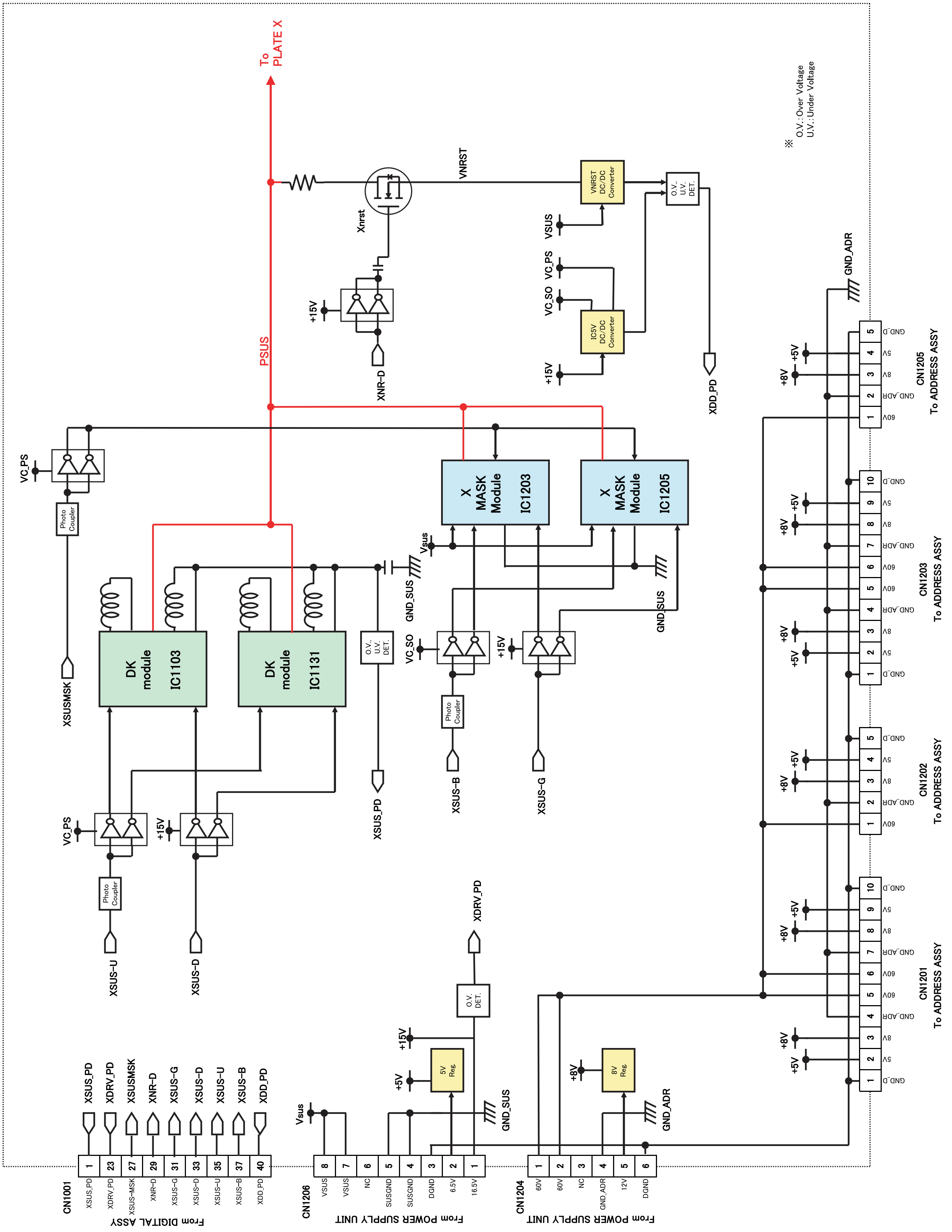
B

C

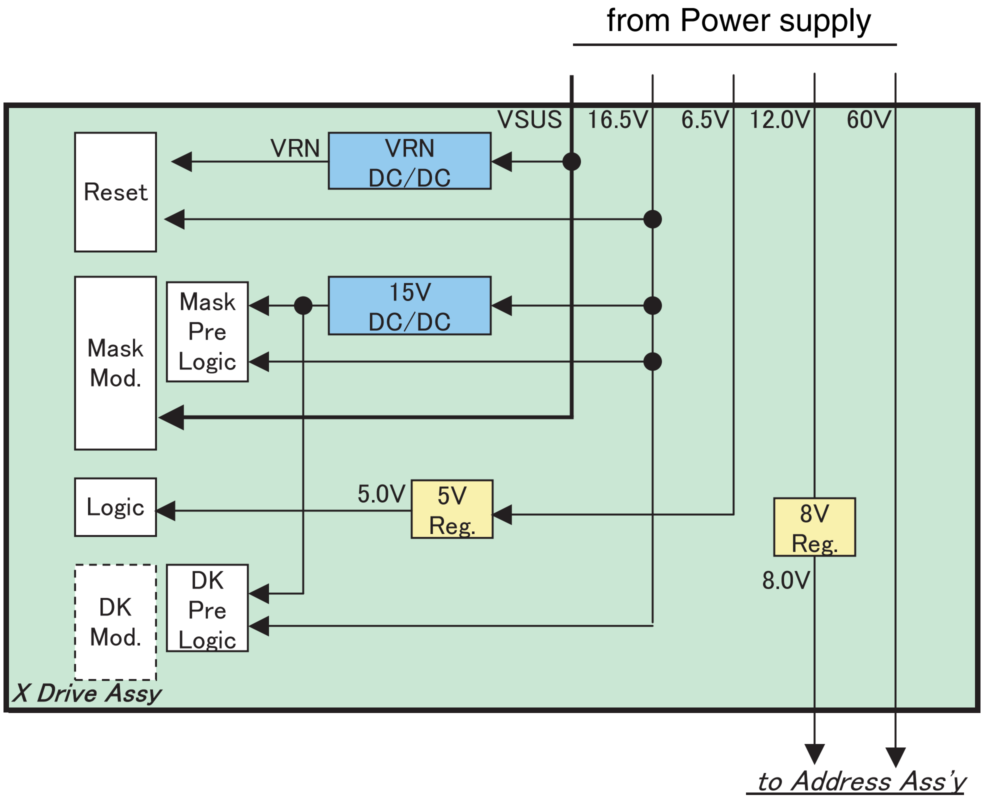
D

E

F

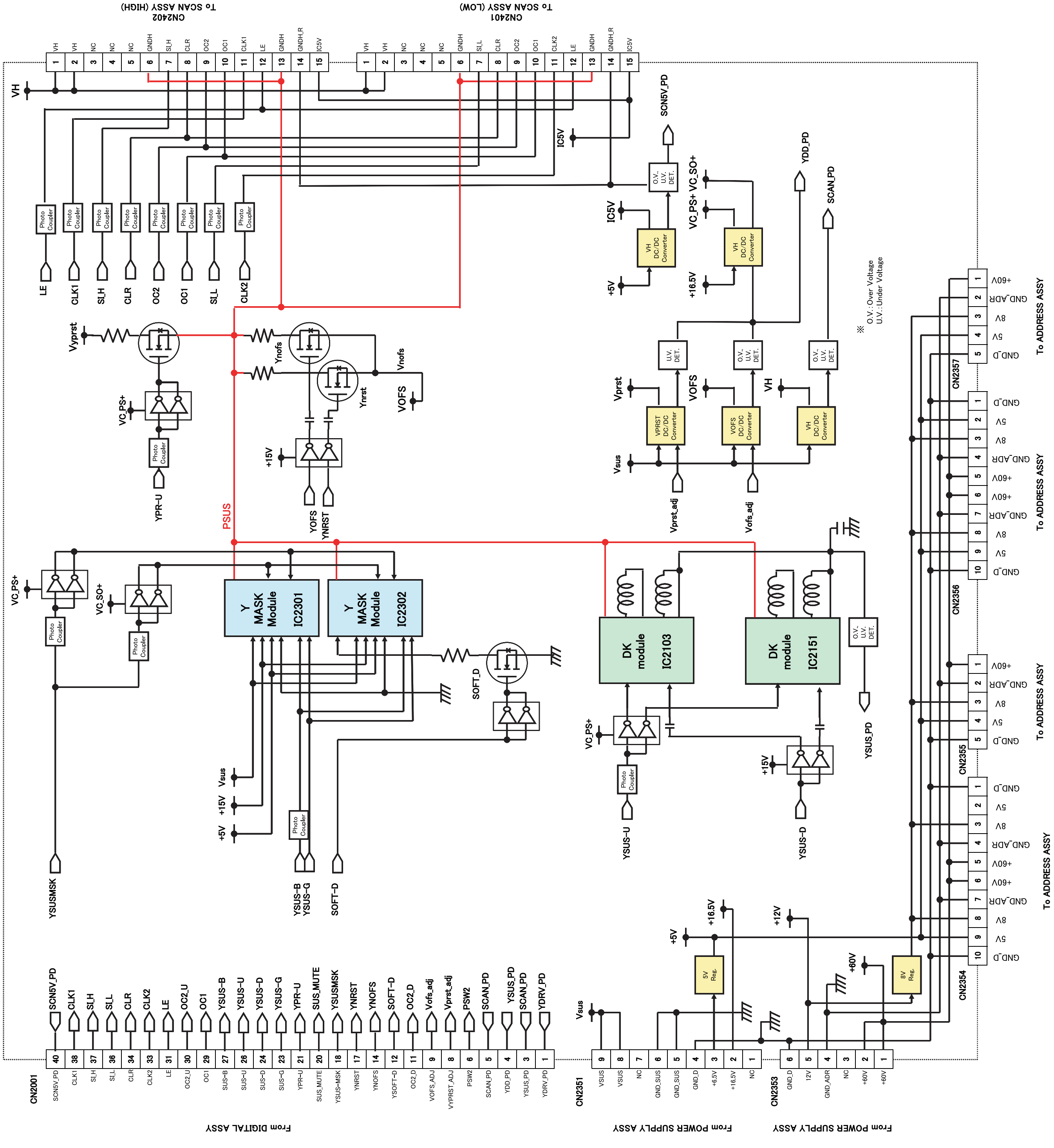

To PLATE X
VNRST
VNRST DC/DC Converter
O.V. U.V. DET.
※ O.V. : Over Voltage
U.V. : Under Voltage
Xnrst
VSUS
VC_PS
VC_SO
IC5V DC/DC Converter
+15V
XNR-D
PSUS
GND_ADR
XDD_PD
VC_PS
Photo Coupler
XSUSMSK
X MASK Module IC1203
X MASK Module IC1205
Vsus
GND_SUS
DK module IC1103
DK module IC1131
O.V. U.V. DET.
XSUS_PD
VC_SO
+15V
XSUS-B
XSUS-G
VC_PS
+15V
XSUS-U
XSUS-D
XDRV_PD
O.V. DET.
5V Reg.
8V Reg.
+15V
+5V
+8V
GND_SUS
GND_ADR
CN1205 To ADDRESS ASSY
CN1203 To ADDRESS ASSY
CN1202 To ADDRESS ASSY
CN1201 To ADDRESS ASSY
GND_D
5V
8V
GND_ADR
60V
+8V
+5V
XSUS_PD
XDRV_PD
XSUSMSK
XNR-D
XSUS-G
XSUS-D
XSUS-U
XSUS-B
XDD_PD
CN1001
From DIGITAL ASSY
1 23 27 29 31 33 35 37 40
CN1206
From POWER SUPPLY UNIT
8 VSUS
7 VSUS
6 NC
5 SUSGND
4 SUSGND
3 DGND
2 6.5V
1 16.5V
CN1204
From POWER SUPPLY UNIT
1 60V
2 60V
3 NC
4 GND_ADR
5 12V
6 DGND

X Drive power supply map

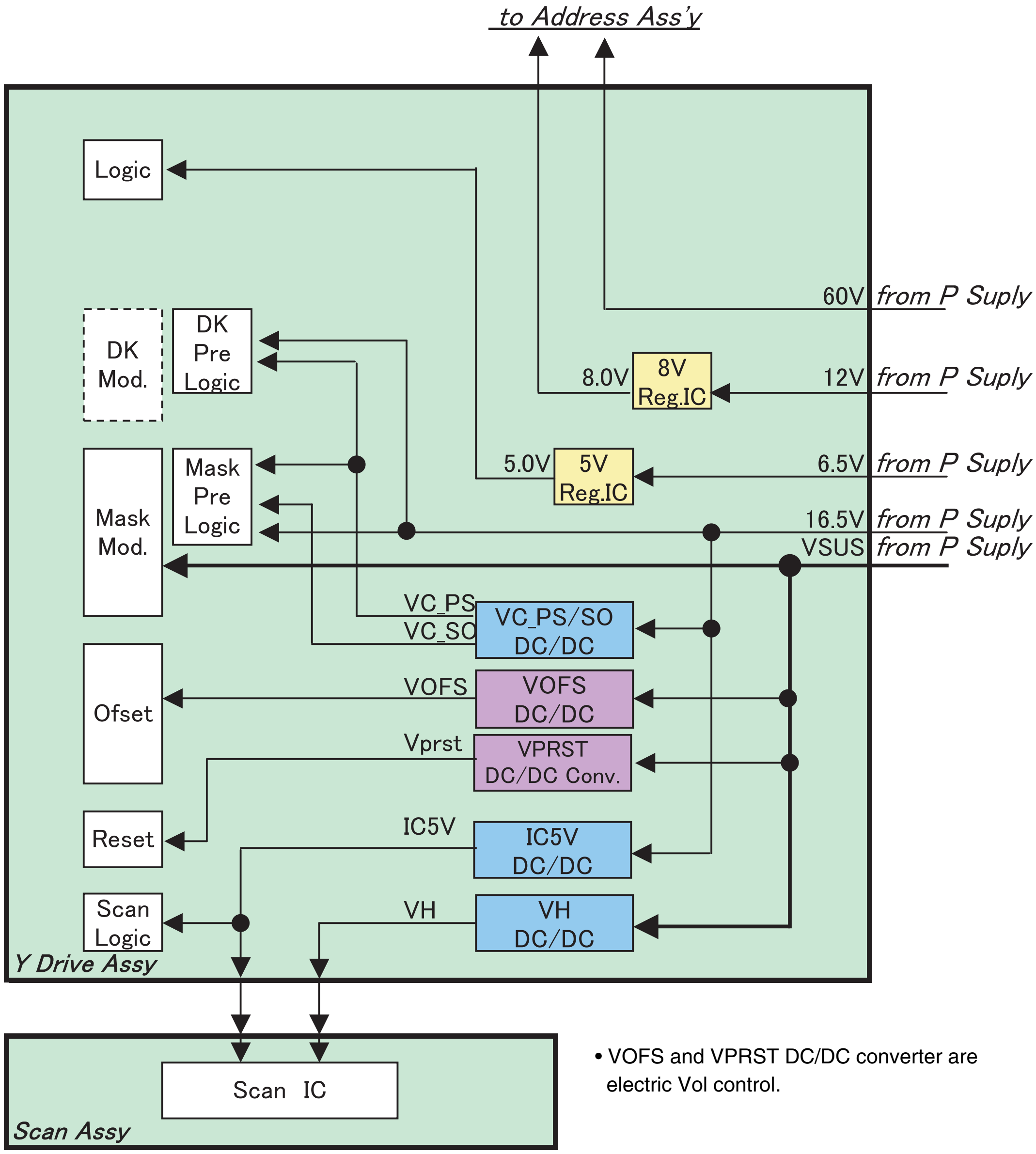

from Power supply
VSUS
16.5V
6.5V
12.0V
60V
VRN
VRN DC/DC
Reset
15V DC/DC
Mask Pre Logic
Mask Mod.
Logic
5.0V
5V Reg.
8V Reg.
8.0V
DK Mod.
DK Pre Logic
X Drive Assy
to Address Ass'y

4.5 50FHD Y DRIVE ASSY

50FHD Y DRIVE ASSY

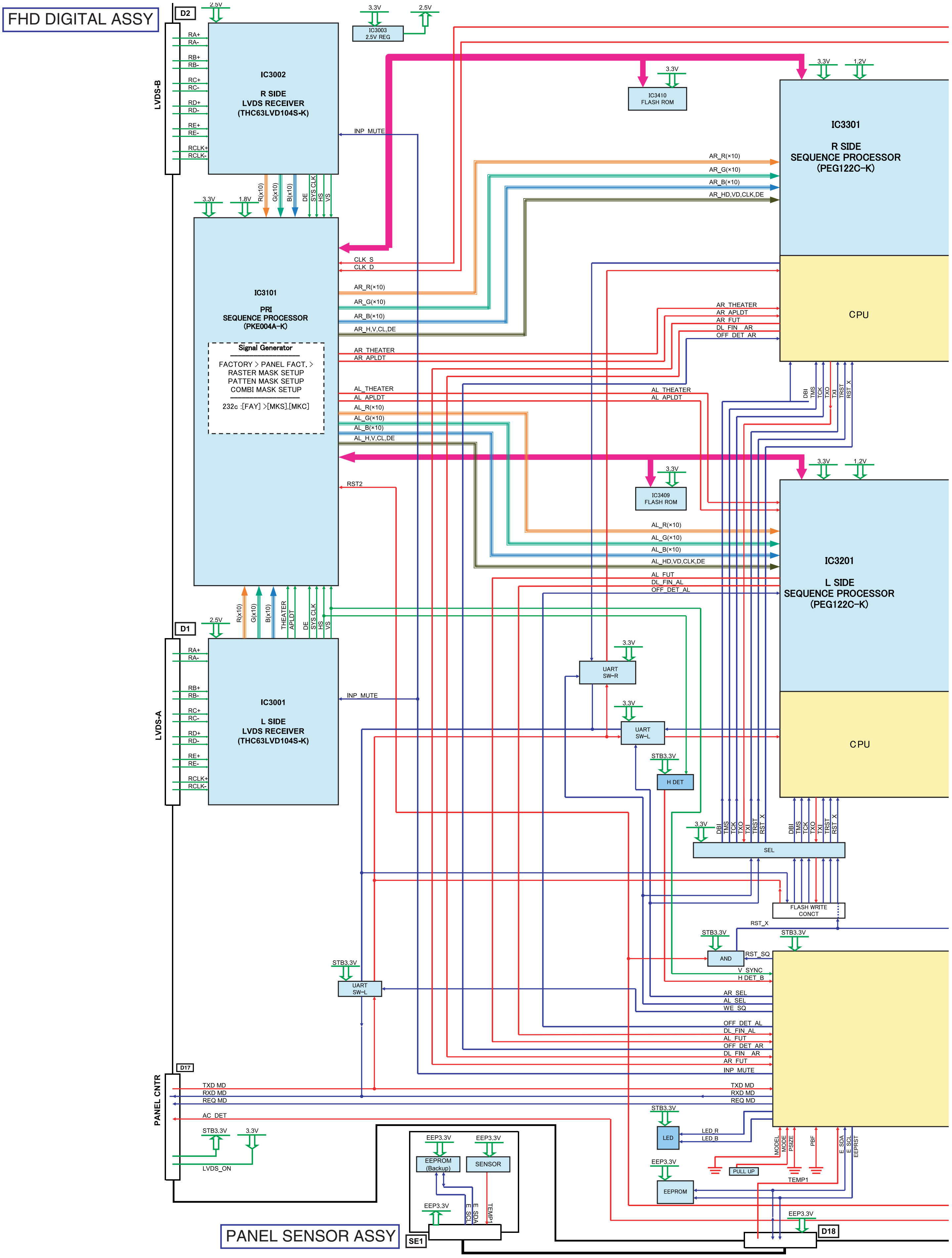

To SCAN ASSY (HIGH)
CN2402
VH
NC
GNDH
SLH
CLR
OC2
OC1
CLK1
LE
GNDH_R
IC5V
To SCAN ASSY (LOW)
CN2401
SLL
CLK2
SCN5V_PD
O.V.
U.V.
DET.
Photo Coupler
CLK1
SLH
CLR
OC2
OC1
SLL
CLK2
VH DC/DC Converter
+5V
+16.5V
VC_PS+
VC_SO+
YDD_PD
SCAN_PD
※ O.V.: Over Voltage
U.V.: Under Voltage
Vyprst
Ynofs
Vnofs
Ynrst
VOFS
YPR-U
+15V
YOFS
YNRST
PSUS
Vprst
VPRST DC/DC Converter
VOFS DC/DC Converter
Vsus
Vprst_adj
Vofs_adj
To ADDRESS ASSY
CN2357
+60V
GND_ADR
8V
5V
GND_D
CN2356
CN2355
CN2354
Y MASK Module IC2301
Y MASK Module IC2302
DK module IC2103
DK module IC2151
SOFT_D
YSUS_PD
YSUS-U
YSUS-D
YSUSMSK
YSUS-B
YSUS-G
SOFT-D
5V Reg.
8V Reg.
+12V
SCN5V_PD
SUS_MUTE
YNOFS
OC2_D
Vofs_adj
Vprst_adj
PSW2
YDRV_PD
CN2001
SCN5V_PD
SUS-B
SUS-U
SUS-D
SUS-G
YSUS-MSK
YSOFT-D
VOFS_ADJ
VYPRST_ADJ
From DIGITAL ASSY
CN2351
VSUS
GND_SUS
+6.5V
+16.5V
From POWER SUPPLY ASSY
CN2353
12V
+60V
From POWER SUPPLY ASSY

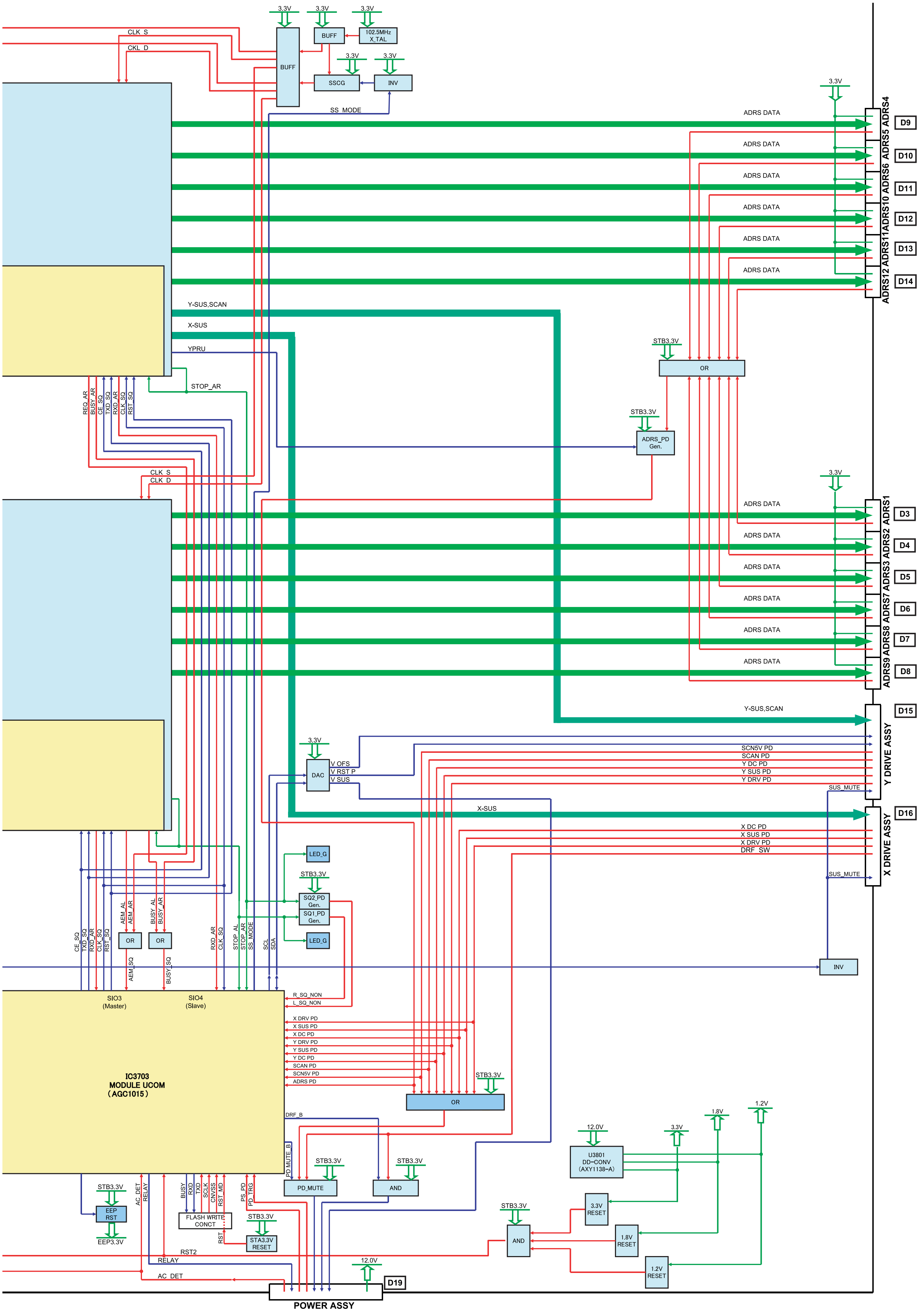
■ Y Drive power supply map


to Address Ass'y
Logic
DK Mod.
DK Pre Logic
Mask Mod.
Mask Pre Logic
60V from P Suply
8.0V
8V Reg.IC
12V from P Suply
5.0V
5V Reg.IC
6.5V from P Suply
16.5V from P Suply
VSUS from P Suply
VC_PS
VC_SO
VC_PS/SO DC/DC
Ofset
VOFS
VOFS DC/DC
Vprst
VPRST DC/DC Conv.
Reset
IC5V
IC5V DC/DC
Scan Logic
VH
VH DC/DC
Y Drive Assy
Scan IC
Scan Assy

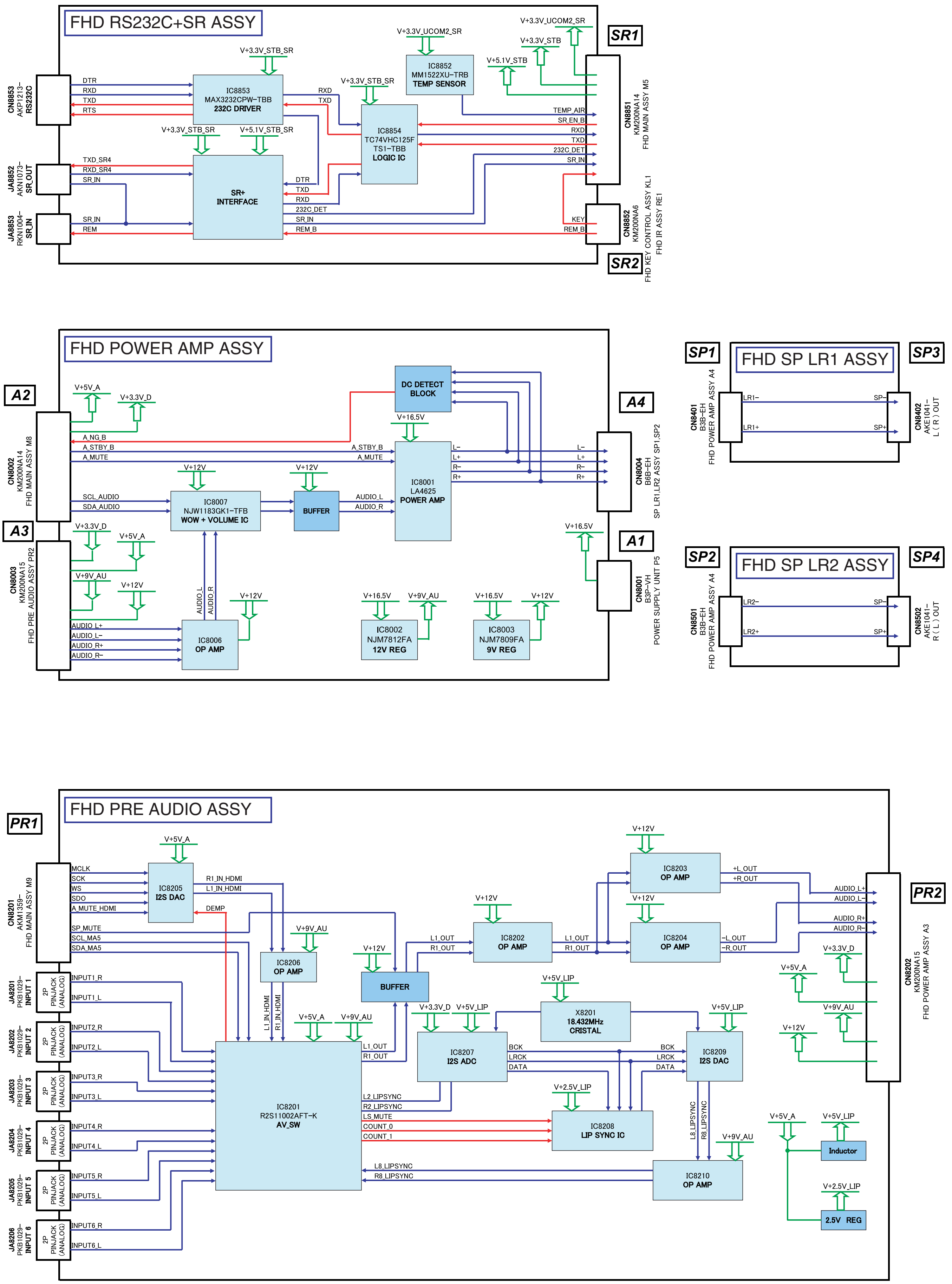
- VOFS and VPRST DC/DC converter are electric Vol control.

4.6 FHD DIGITAL AND PANEL SENSOR ASSYS


FHD DIGITAL ASSY
D2
LVDS-B
RA+
RA-
RB+
RB-
RC+
RC-
RD+
RD-
RE+
RE-
RCLK+
RCLK-
2.5V
IC3002
R SIDE
LVDS RECEIVER
(THC63LVD104S-K)
3.3V
2.5V
IC3003
2.5V REG
INP_MUTE
R(x10)
G(x10)
B(x10)
DE
SYS CLK
HS
VS
1.8V
IC3410
FLASH ROM
1.2V
IC3301
R SIDE
SEQUENCE PROCESSOR
(PEG122C-K)
AR_R(×10)
AR_G(×10)
AR_B(×10)
AR_HD,VD,CLK,DE
CPU
AR_THEATER
AR_APLDT
AR_FUT
DL_FIN_AR
OFF_DET_AR
DBI
TMS
TCK
TXO
TXI
TRST
RST_X
IC3101
PRI
SEQUENCE PROCESSOR
(PKE004A-K)
Signal Generator
FACTORY > PANEL FACT. >
RASTER MASK SETUP
PATTEN MASK SETUP
COMBI MASK SETUP
232c :[FAY] >[MKS],[MKC]
CLK_S
CLK_D
AR_R(×10)
AR_G(×10)
AR_B(×10)
AR_H,V,CL,DE
AR_THEATER
AR_APLDT
AL_THEATER
AL_APLDT
AL_R(×10)
AL_G(×10)
AL_B(×10)
AL_H,V,CL,DE
RST2
IC3409
FLASH ROM
AL_THEATER
AL_APLDT
AL_R(×10)
AL_G(×10)
AL_B(×10)
AL_HD,VD,CLK,DE
AL_FUT
DL_FIN_AL
OFF_DET_AL
IC3201
L SIDE
SEQUENCE PROCESSOR
(PEG122C-K)
CPU
THEATER
APLDT
D1
LVDS-A
IC3001
L SIDE
LVDS RECEIVER
(THC63LVD104S-K)
INP_MUTE
UART
SW-R
UART
SW-L
STB3.3V
H DET
SEL
FLASH WRITE
CONCT
RST_X
AND
RST_SQ
V_SYNC
H DET_B
AR_SEL
AL_SEL
WE_SQ
OFF_DET_AL
DL_FIN_AL
AL_FUT
OFF_DET_AR
DL_FIN_AR
AR_FUT
INP_MUTE
TXD MD
RXD MD
REQ MD
UART
SW-L
D17
PANEL CNTR
TXD MD
RXD MD
REQ MD
AC_DET
STB3.3V
3.3V
LVDS_ON
LED
LED R
LED B
MODEL
MODE
PSIZE
PBF
E_SDA
E_SCL
EEPRST
PULL UP
TEMP1
EEP3.3V
EEPROM
EEPROM
(Backup)
SENSOR
E_SCL
E_SDA
TEMP1
SE1
D18
PANEL SENSOR ASSY

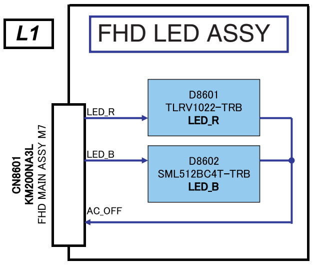
3.3V
3.3V
3.3V
BUFF
102.5MHz X_TAL
BUFF
3.3V
3.3V
SSCG
INV
SS_MODE
CLK_S
CKL_D
ADRS DATA
3.3V
D9
D10
D11
D12
D13
D14
ADRS4
ADRS5
ADRS6
ADRS10
ADRS11
ADRS12
Y-SUS,SCAN
X-SUS
YPRU
STOP_AR
STB3.3V
OR
STB3.3V
ADRS_PD Gen.
REQ_AR
BUSY_AR
CE_SQ
TXD_SQ
RXD_AR
CLK_SQ
RST_SQ
CLK_S
CLK_D
D3
D4
D5
D6
D7
D8
ADRS1
ADRS2
ADRS3
ADRS7
ADRS8
ADRS9
D15
Y DRIVE ASSY
3.3V
DAC
V OFS
V RST P
V SUS
SCN5V PD
SCAN PD
Y DC PD
Y SUS PD
Y DRV PD
SUS_MUTE
X-SUS
D16
X DRIVE ASSY
X DC PD
X SUS PD
X DRV PD
DRF_SW
SUS_MUTE
LED_G
STB3.3V
SQ2_PD Gen.
SQ1_PD Gen.
LED_G
CE_SQ
TXD_SQ
RXD_AR
CLK_SQ
RST_SQ
AEM_AL
AEM_AR
BUSY_AL
BUSY_AR
OR
OR
AEM_SQ
BUSY_SQ
RXD_AR
CLK_SQ
STOP_AL
STOP_AR
SS_MODE
SCL
SDA
INV
SIO3 (Master)
SIO4 (Slave)
R_SQ_NON
L_SQ_NON
X DRV PD
X SUS PD
X DC PD
Y DRV PD
Y SUS PD
Y DC PD
SCAN PD
SCN5V PD
ADRS PD
IC3703
MODULE UCOM
（AGC1015）
STB3.3V
OR
DRF_B
PD MUTE_B
STB3.3V
STB3.3V
PD_MUTE
AND
12.0V
U3801 DD-CONV (AXY1138-A)
3.3V
1.8V
1.2V
STB3.3V
EEP RST
EEP3.3V
AC_DET
RELAY
BUSY
RXD
TXD
SCLK
CNVSS
RST_MD
FLASH WRITE CONCT
RST
PS_PD
PD_TRG
STB3.3V
STA3.3V RESET
STB3.3V
AND
3.3V RESET
1.8V RESET
1.2V RESET
RST2
RELAY
AC_DET
12.0V
D19
POWER ASSY
5
6
7
8
A
B
C
D
E
F

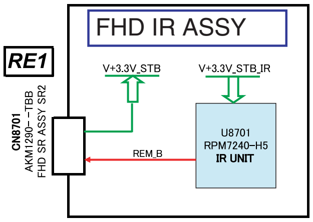
4.7 FHD FUKUGO ASSY (1/2)

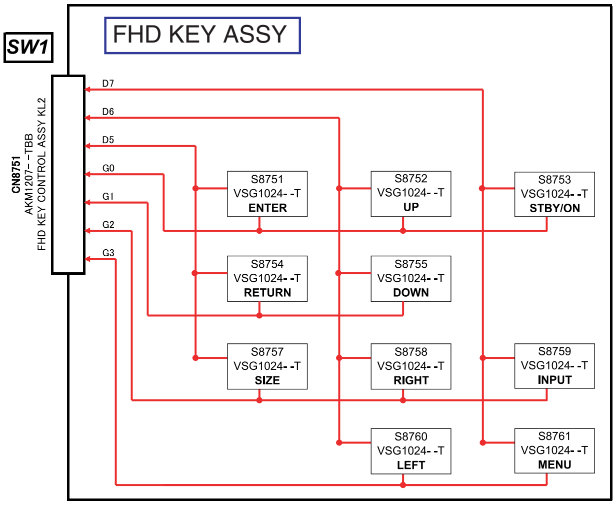


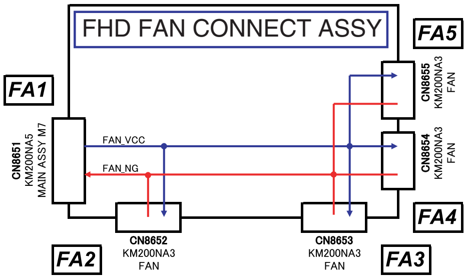
FHD RS232C+SR ASSY
SR1
SR2
CN8853 AKP1213- RS232C
JA8852 AKN1073- SR_OUT
JA8853 RKN1004- SR_IN
DTR
RXD
TXD
RTS
TXD_SR4
RXD_SR4
SR_IN
REM
V+3.3V_STB_SR
IC8853 MAX3232CPW-TBB 232C DRIVER
V+5.1V_STB_SR
SR+ INTERFACE
232C_DET
REM_B
IC8852 MM1522XU-TRB TEMP SENSOR
V+3.3V_UCOM2_SR
V+3.3V_STB
V+5.1V_STB
IC8854 TC74VHC125F TS1-TBB LOGIC IC
TEMP_AIR
SR_EN_B
KEY
CN8851 KM200NA14 FHD MAIN ASSY M5
CN8852 KM200NA6 FHD KEY CONTROL ASSY KL1 FHD IR ASSY RE1
FHD POWER AMP ASSY
A2
A3
A4
A1
V+5V_A
V+3.3V_D
A_NG_B
A_STBY_B
A_MUTE
SCL_AUDIO
SDA_AUDIO
CN8002 KM200NA14 FHD MAIN ASSY M8
CN8003 KM200NA15 FHD PRE AUDIO ASSY PR2
V+9V_AU
V+12V
AUDIO_L+
AUDIO_L-
AUDIO_R+
AUDIO_R-
IC8007 NJW1183GK1-TFB WOW + VOLUME IC
BUFFER
AUDIO_L
AUDIO_R
DC DETECT BLOCK
V+16.5V
IC8001 LA4625 POWER AMP
L-
L+
R-
R+
IC8006 OP AMP
IC8002 NJM7812FA 12V REG
IC8003 NJM7809FA 9V REG
CN8004 B6B-EH SP LR1,LR2 ASSY SP1,SP2
CN8001 B3P-VH POWER SUPPLY UNIT P5
FHD SP LR1 ASSY
SP1
SP3
CN8401 B3B-EH FHD POWER AMP ASSY A4
LR1-
LR1+
SP-
SP+
CN8402 AKE1041- L (R) OUT
FHD SP LR2 ASSY
SP2
SP4
CN8501 B3B-EH FHD POWER AMP ASSY A4
LR2-
LR2+
CN8502 AKE1041- R (L) OUT
FHD PRE AUDIO ASSY
PR1
PR2
CN8201 AKM1359- FHD MAIN ASSY M9
MCLK
SCK
WS
SDO
A_MUTE_HDMI
SP_MUTE
SCL_MA5
SDA_MA5
IC8205 I2S DAC
R1_IN_HDMI
L1_IN_HDMI
DEMP
IC8206 OP AMP
JA8201 PKB1029- INPUT 1 2P PINJACK (ANALOG)
JA8202 PKB1029- INPUT 2 2P PINJACK (ANALOG)
JA8203 PKB1029- INPUT 3 2P PINJACK (ANALOG)
JA8204 PKB1029- INPUT 4 2P PINJACK (ANALOG)
JA8205 PKB1029- INPUT 5 2P PINJACK (ANALOG)
JA8206 PKB1029- INPUT 6 2P PINJACK (ANALOG)
INPUT1_R
INPUT1_L
INPUT2_R
INPUT2_L
INPUT3_R
INPUT3_L
INPUT4_R
INPUT4_L
INPUT5_R
INPUT5_L
INPUT6_R
INPUT6_L
IC8201 R2S11002AFT-K AV_SW
L1_OUT
R1_OUT
L2_LIPSYNC
R2_LIPSYNC
LS_MUTE
COUNT_0
COUNT_1
L8_LIPSYNC
R8_LIPSYNC
IC8202 OP AMP
IC8203 OP AMP
IC8204 OP AMP
+L_OUT
+R_OUT
-L_OUT
-R_OUT
IC8207 I2S ADC
V+5V_LIP
X8201 18.432MHz CRISTAL
BCK
LRCK
DATA
IC8209 I2S DAC
V+2.5V_LIP
IC8208 LIP SYNC IC
IC8210 OP AMP
Inductor
2.5V REG
CN8202 KM200NA15 FHD POWER AMP ASSY A3

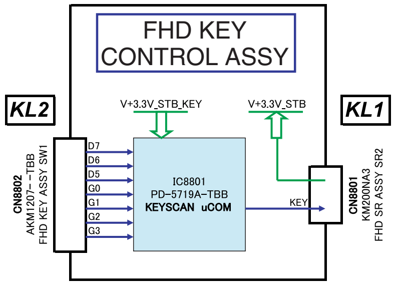
4.8 FHD FUKUGO ASSY (2/2)


L1
FHD LED ASSY
CN8601
KM200NA3L
FHD MAIN ASSY M7
LED_R
LED_B
AC_OFF
D8601
TLRV1022−TRB
LED_R
D8602
SML512BC4T−TRB
LED_B


RE1
FHD IR ASSY
CN8701
AKM1290−−TBB
FHD SR ASSY SR2
V+3.3V_STB
V+3.3V_STB_IR
REM_B
U8701
RPM7240−H5
IR UNIT

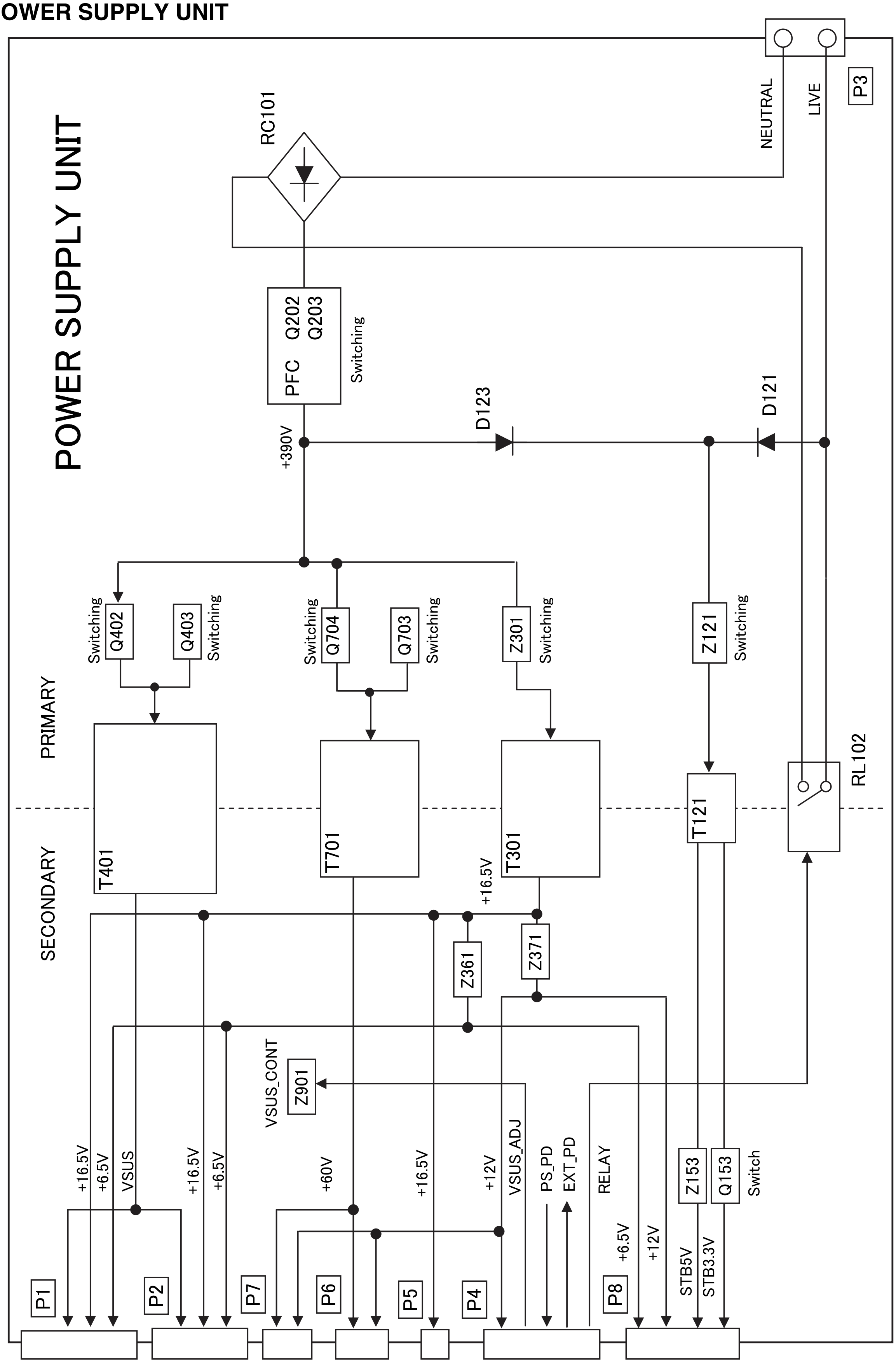

SW1
FHD KEY ASSY
CN8751
AKM1207−−TBB
FHD KEY CONTROL ASSY KL2
D7
D6
D5
G0
G1
G2
G3
S8751
VSG1024- -T
ENTER
S8752
VSG1024- -T
UP
S8753
VSG1024- -T
STBY/ON
S8754
VSG1024- -T
RETURN
S8755
VSG1024- -T
DOWN
S8757
VSG1024- -T
SIZE
S8758
VSG1024- -T
RIGHT
S8759
VSG1024- -T
INPUT
S8760
VSG1024- -T
LEFT
S8761
VSG1024- -T
MENU


FHD FAN CONNECT ASSY
FA5
FA1
CN8655
KM200NA3
FAN
CN8651
KM200NA5
MAIN ASSY M7
FAN_VCC
FAN_NG
CN8654
KM200NA3
FAN
FA4
FA2
CN8652
KM200NA3
FAN
CN8653
KM200NA3
FAN
FA3


FHD KEY
CONTROL ASSY
KL2
KL1
V+3.3V_STB_KEY
V+3.3V_STB
CN8802
AKM1207−−TBB
FHD KEY ASSY SW1
D7
D6
D5
G0
G1
G2
G3
IC8801
PD−5719A−TBB
KEYSCAN uCOM
KEY
CN8801
KM200NA3
FHD SR ASSY SR2

4.9 POWER SUPPLY UNIT

■ POWER SUPPLY UNIT


POWER SUPPLY UNIT
RC101
NEUTRAL
LIVE
P3
PFC
Q202
Q203
Switching
D123
D121
+390V
Q402
Switching
Q403
Switching
Q704
Switching
Q703
Switching
Z301
Switching
Z121
Switching
PRIMARY
SECONDARY
T401
T701
T301
T121
RL102
+16.5V
Z361
Z371
VSUS_CONT
Z901
+16.5V
+6.5V
VSUS
+16.5V
+6.5V
+60V
+16.5V
+12V
VSUS_ADJ
PS_PD
EXT_PD
RELAY
Z153
Q153
Switch
+6.5V
+12V
STB5V
STB3.3V
P1
P2
P7
P6
P5
P4
P8

4.10 CONNECTOR PIN DESCRIPTION

FHD DIGITAL ASSY

D3 : CN3601 (AKM1348)
D4 : CN3602 (AKM1348)
D5 : CN3603 (AKM1348)
D9 : CN3607 (AKM1348)
D10 : CN3608 (AKM1348)
D11 : CN3609 (AKM1348)

⟷

50FHD ADDRESS A ASSY

AD1 : CN1502 (AKM1348)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND_D	0	GND_D	40	GND
2	DIV0	0 or 3.3	DIV0	39	Output timing control signal output
3	DIV1	0 or 3.3	DIV1	38	Output timing control signal output
4	GND_D	0	GND_D	37	GND
5	+3_3V	3.3	+3_3V	36	+3.3V power sypply
6	+3_3V	3.3	+3_3V	35	+3.3V power sypply
7	GND_D	0	GND_D	34	GND
8	LVDSGND	0	LVDSGND	33	GND
9	NC	-	NC	32	Non-connection termial
10	DP	1～1.4	DP	31	LVDS differential signal D+ output
11	DN	1～1.4	DN	30	LVDS differential signal D- output
12	NC	-	NC	29	Non-connection termial
13	LVDSGND	0	LVDSGND	28	GND
14	NC	-	NC	27	Non-connection termial
15	CLKP	1～1.4	CLKP	26	LVDS differential signal CLK+ output
16	CLKN	1～1.4	CLKN	25	LVDS differential signal CLK- output
17	NC	-	NC	24	Non-connection termial
18	LVDSGND	0	LVDSGND	23	GND
19	NC	-	NC	22	Non-connection termial
20	CP	1～1.4	CP	21	LVDS differential signal C+ output
21	CN	1～1.4	CN	20	LVDS differential signal C- output
22	NC	-	NC	19	Non-connection termial
23	LVDSGND	0	LVDSGND	18	GND
24	NC	-	NC	17	Non-connection termial
25	BP	1～1.4	BP	16	LVDS differential signal B+ output
26	BN	1～1.4	BN	15	LVDS differential signal B- output
27	NC	-	NC	14	Non-connection termial
28	LVDSGND	0	LVDSGND	13	GND
29	NC	-	NC	12	Non-connection termial
30	AP	1～1.4	AP	11	LVDS differential signal A+ output
31	AN	1～1.4	AN	10	LVDS differential signal A- output
32	NC	-	NC	9	Non-connection termial
33	LVDSGND	0	LVDSGND	8	GND
34	GND_D	0	GND_D	7	GND
35	NC	-	NC	6	Non-connection termial
36	NC	-	NC	5	Non-connection termial
37	GND_D	0	GND_D	4	GND
38	GND_D	0	GND_D	3	GND
39	ADRPD	0	ADRPD	2	Address PD signal input
40	NC	-	NC	1	Non-connection termial

FHD DIGITAL ASSY

D6 : CN3604 (AKM1348)
D7 : CN3605 (AKM1348)
D8 : CN3606 (AKM1348)
D12 : CN3610 (AKM1348)
D13 : CN3611 (AKM1348)
D14 : CN3612 (AKM1348)

50FHD ADDRESS B ASSY

AD1 : CN1702 (AKM1348)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND_D	0	GND_D	40	GND
2	DIV0	0 or 3.3	DIV0	39	Output timing control signal output
3	DIV1	0 or 3.3	DIV1	38	Output timing control signal output 4 GND_D 0
GND_D	37	GND			
5	+3_3V	3.3	+3_3V	36	+3.3V power sypply
6	+3_3V	3.3	+3_3V	35	+3.3V power sypply
7	GND_D	0	GND_D	34	GND
8	LVDSGND	0	LVDSGND	33	GND
9	NC	-	NC	32	Non-connection termial
10	DP	1～1.4	DP	31	LVDS differential signal D+ output
11	DN	1～1.4	DN 3	0	LVDS differential signal D- output
12	NC	-	NC	29	Non-connection termial
13	LVDSGND	0	LVDSGND	28	GND
14	NC	-	NC	27	Non-connection termial
15	CLKP	1～1.4	CLKP	26	LVDS differential signal CLK+ output
16	CLKN	1～1.4	CLKN	25	LVDS differential signal CLK- output
17	NC	-	NC	24	Non-connection termial
18	LVDSGND	0	LVDSGND	23	GND
19	NC	-	NC	22	Non-connection termial
20	CP	1～1.4	CP	21	LVDS differential signal C+ output
21	CN	1～1.4	CN	20	LVDS differential signal C- output
22	NC	-	NC	19	Non-connection termial
23	LVDSGND	0	LVDSGND	18	GND
24	NC	-	NC	17	Non-connection termial
25	BP	1～1.4	BP	16	LVDS differential signal B+ output
26	BN	1～1.4	BN	15	LVDS differential signal B- output
27	NC	-	NC	14	Non-connection termial
28	LVDSGND	0	LVDSGND 1	3	GND
29	NC	-	NC	12	Non-connection termial
30	AP	1～1.4	AP	11	LVDS differential signal A+ output
31	AN	1～1.4	AN	10	LVDS differential signal A- output
32	NC	-	NC	9	Non-connection termial
33	LVDSGND	0	LVDSGND	8	GND
34	GND_D	0	GND_D	7	GND
35	NC	-	NC	6	Non-connection termial
36	NC	-	NC	5	Non-connection termial
37	GND_D	0	GND_D	4	GND
38	GND_D	0	GND_D	3	GND
39	ADRPD	0	ADRPD	2	Address PD signal input
40	NC	-	NC	1	Non-connection termial

FHD DIGITAL ASSY ⇔ **50FHD X DRIVE ASSY**

D16 : CN3613 (AKM1348) ⇔ X1: CN1001 (AKM1348)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	XDD_PD	0	XDD_PD	40	X DRIVE PD signal input
2	NC	-	NC	39	Non-connection termial
3	DGND	0	DGND	38	GND
4	XSUS-B	0～3.3	XSUS-B	37	X DRIVE control signal output
5	DGND	0	DGND	36	GND
6	XSUS-U	0～3.3	XSUS-U	35	X DRIVE control signal output
7	DGND	0	DGND	34	GND
8	XSUS-D	0～3.3	XSUS-D	33	X DRIVE control signal output
9	DGND	0	DGND	32	GND
10	XSUS-G	0～3.3	XSUS-G	31	X DRIVE control signal output
11	DGND	0	DGND	30	GND
12	XNR-D	0～3.3	XNR-D	29	X DRIVE control signal output
13	DGND	0	DGND	28	GND
14	XSUS-MSK	0～3.3	XSUS-MSK	27	X DRIVE control signal output
15	DGND	0	DGND	26	GND
16	SUS_MUTE	0～5.0	SUS_MUTE	25	X DRIVE mute signal input
17	DGND	0	DGND	24	GND
18	XDRV_PD	0	XDRV_PD	23	X DRIVE PD signal input
19	DGND	0	DGND	22	GND
20	XResv2	-	XResv2	21	X DRIVE control signal output (Reserve)
21	XResv3	-	XResv3	20	X DRIVE control signal output (Reserve)
22	XResv4	-	XResv4	19	X DRIVE control signal output (Reserve)
23	DGND	0	DGND	18	GND
24	NC	-	NC	17	Non-connection termial
25	NC	-	NC	16	Non-connection termial
26	NC	-	NC	15	Non-connection termial
27	NC	-	NC	14	Non-connection termial
28	NC	-	NC	13	Non-connection termial
29	NC	-	NC	12	Non-connection termial
30	NC	-	NC	11	Non-connection termial
31	NC	-	NC	10	Non-connection termial
32	NC	-	NC	9	Non-connection termial
33	NC	-	NC	8	Non-connection termial
34	NC	-	NC	7	Non-connection termial
35	NC	-	NC	6	Non-connection termial
36	NC	-	NC	5	Non-connection termial
37	NC	-	NC	4	Non-connection termial
38	DRF_SW	0～3.3	DRF_SW	3	DRIVE OFF signal input
39	NC	-	NC	2	Non-connection termial
40	XSUS_PD	0	XSUS_PD	1	X DRIVE PD signal input

FHD DIGITAL ASSY

D15 : CN3614 (AKM1348)

50FHD Y DRIVE ASSY

Y1: CN2001 (AKM1348)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	SCN5V_PD	0	SCN5V_PD	40	Y DRIVE PD signal input
2	NC	-	NC	39	Non-connection termial
3	CLK1	0～3.3	CLK1	38	SCAN control signal output
4	SI_H	0～3.3	SI_H	37	SCAN control signal output
5	SI_L	0～3.3	SI_L	36	SCAN control signal output
6	DGND	0	DGND	35	GND
7	CLR	0～3.3	CLR	34	SCAN control signal output
8	CLK2	0～3.3	CLK2	33	SCAN control signal output
9	DGND	0	DGND	32	GND
10	LE	0～3.3	LE	31	SCAN control signal output
11	OC2_U	0～3.3	OC2_U	30	SCAN control signal output
12	OC1	0～3.3	OC1	29	SCAN control signal output
13	DGND	0	DGND	28	GND
14	YSUS-B	0～3.3	YSUS-B	27	Y DRIVE control signal output
15	YSUS-U	0～3.3	YSUS-U	26	Y DRIVE control signal output
16	DGND	0	DGND	25	GND
17	YSUS-D	0～3.3	YSUS-D	24	Y DRIVE control signal output
18	YSUS-G	0～3.3	YSUS-G	23	Y DRIVE control signal output
19	DGND	0	DGND	22	GND
20	YPR-U	0～3.3	YPR-U	21	Y DRIVE control signal output
21	SUS_MUTE	0～5.0	SUS_MUTE	20	Y DRIVE mute signal output
22	DGND	0	DGND	19	GND
23	YSUS-MSK	0～3.3	YSUS-MSK	18	Y DRIVE control signal output
24	YNRST	0～3.3	YNRST	17	Y DRIVE control signal output
25	YRSV2	-	YRSV2	16	Y DRIVE control signal output (Reserve)
26	DGND	0	DGND	15	GND
27	YNOFS	0～3.3	YNOFS	14	Y DRIVE control signal output
28	YRSV3	-	YRSV3	13	Y DRIVE control signal output (Reserve)
29	YSOFT-D	0～3.3	YSOFT-D	12	Y DRIVE control signal output
30	OC2_D	0～3.3	OC2_D	11	SCAN control signal output
31	DGND	0	DGND	10	GND
32	VOFS_ADJ	0～3.3	VOFS_ADJ	9	Vofs offset adjustment signal output
33	VYPRST_ADJ	0～3.3	VYPRST_ADJ	8	Reset voltage adjustment signal output
34	DGND	0	DGND	7	GND
35	NC	-	NC	6	Non-connection termial
36	SCAN_PD	0	SCAN_PD	5	Y DRIVE PD signal input
37	YDD_PD	0	YDD_PD	4	Y DRIVE PD signlal input
38	YSUS_PD	0	YSUS_PD	3	Y DRIVE PD signlal input
39	NC	-	NC	2	Non-connection termial
40	YDRV_PD	0	YDRV_PD	1	Y DRIVE PD signal input

FHD MAIN ASSY **POWER SUPPLY UNIT**

M1 : CN4006 (KM200NA11) ⟷ P8: - (B11-PH-S)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	V+12V	12.1	+12V	1	12V power supply
2	V+12V	12.1	+12V	2	12V power supply
3	GND	0	GND_D	3	GND
4	GND	0	GND_D	4	GND
5	V+6_5V	6.6	+6_5V	5	6.5V power supply
6	V+6_5V	6.6	+6_5V	6	6.5V power supply
7	GND	0	GND_D	7	GND
8	GND	0	GND_D	8	GND
9	STB5V	5.0	STB5V	9	Standby 5.1V power supply
10	STB3_3V	3.3	STB3_3V	10	Standby 3.3V power supply
11	GND_STB	0	GND_STB	11	GND

FHD MAIN ASSY **FHD DIGITAL ASSY**

M2 : CN4207 (AKM1278) ⟷ D17: CN3703 (AKM1278)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	V+3_3V_UCOM2	3.3	STB3.3V	1	3.3V power supply for main microcomputer/module microcomputer
2	AC_DET	3.2	AC_DET	2	AC detected signal input
3	MD_REQ	0	REQ_MD	3	Communication demand on a Module microcomputer
4	MD_RTXD	0-3.3	RXD_MD	4	UART Communication data input demand with a Module microcomputer
5	MD_TRXD	0-3.3	TXD_MD	5	UART Communication data output demand with a Module microcomputer
6	LVDS_ON	3.0	LVDS_ON	6	LVDS IC output control signal
7	GND	0	GND_D	7	GND

FHD MAIN ASSY **FHD DIGITAL ASSY**

M3 : CN4205 (AKM1239) ⟷ D1: CN3001 (AKM1239)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND	0	GND	31	GND
2	GND	0	GND	30	GND
3	GND	0	GND	29	GND
4	GND	0	GND	28	GND
5	GND	0	GND	27	GND
6	GND	0	GND	26	GND
7	GND	0	GND	25	GND
8	MDL_EP	1.1 〜1.5	MDL_EP	24	L for LVDS differential signal TE + output
9	MDL_EN	1.1 〜1.5	MDL_EN	23	L for LVDS differential signal TE - output
10	GND	0	GND	22	GND
11	MDL_DP	1.1 〜1.5	MDL_DP	21	L for LVDS differential signal TD + output
12	MDL_DN	1.1 〜1.5	MDL_DN	20	L for LVDS differential signal TD - output
13	GND	0	GND	19	GND
14	MDL_CLKP	1.1 〜1.5	MDL_CLKP	18	L for LVDS differential signal TCLK + output
15	MDL_CLKN	1.1 〜1.5	MDL_CLKN	17	L for LVDS differential signal TCLK - output
16	GND	0	GND	16	GND
17	MDL_CP	1.1 〜1.5	MDL_CP	15	L for LVDS differential signal TC + output
18	MDL_CN	1.1 〜1.5	MDL_CN	14	L for LVDS differential signal TC - output
19	GND	0	GND	13	GND
20	MDL_BP	1.1 〜1.5	MDL_BP	12	L for LVDS differential signal TB + output
21	MDL_BN	1.1 〜1.5	MDL_BN	11	L for LVDS differential signal TB - output
22	GND	0	GND	10	GND
23	MDL_AP	1.1 〜1.5	MDL_AP	9	L for LVDS differential signal TA + output
24	MDL_AN	1.1 〜1.5	MDL_AN	8	L for LVDS differential signal TA - output
25	GND	0	GND	7	GND
26	GND	0	GND	6	GND
27	GND	0	GND	5	GND
28	GND	0	GND	4	GND
29	GND	0	GND	3	GND
30	GND	0	GND	2	GND
31	GND	0	GND	1	GND

FHD MAIN ASSY ↔ **FHD DIGITAL ASSY**

M4 : CN4206 (AKM1239) ↔ D2: CN3002 (AKM1239)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND	0	GND	31	GND
2	GND	0	GND	30	GND
3	GND	0	GND	29	GND
4	GND	0	GND	28	GND
5	GND	0	GND	27	GND
6	GND	0	GND	26	GND
7	GND	0	GND	25	GND
8	MDR_EP	1.1-1.5	MDR_EP	24	R for LVDS differential signal TE+ output
9	MDR_EN	1.1-1.5	MDR_EN	23	R for LVDS differential signal TE- output
10	GND	0	GND	22	GND
11	MDR_DP	1.1-1.5	MDR_DP	21	R for LVDS differential signal TD+ output
12	MDR_DN	1.1-1.5	MDR_DN	20	R for LVDS differential signal TD- output
13	GND	0	GND	19	GND
14	MDR_CLKP	1.1-1.5	MDR_CLKP	18	R for LVDS differential signal TCLK+ output
15	MDR_CLKN	1.1-1.5	MDR_CLKN	17	R for LVDS differential signal TCLK- output
16	GND	0	GND	16	GND
17	MDR_CP	1.1-1.5	MDR_CP	15	R for LVDS differential signal TC+ output
18	MDR_CN	1.1-1.5	MDR_CN	14	R for LVDS differential signal TC- outputt
19	GND	0	GND	13	GND
20	MDR_BP	1.1-1.5	MDR_BP	12	R for LVDS differential signal TB+ output
21	MDR_BN	1.1-1.5	MDR_BN	11	R for LVDS differential signal TB- output
22	GND	0	GND	10	GND
23	MDR_AP	1.1-1.5	MDR_AP	9	R for LVDS differential signal TA+ output
24	MDR_AN	1.1-1.5	MDR_AN	8	R for LVDS differential signal TA- output
25	GND	0	GND	7	GND
26	GND	0	GND	6	GND
27	GND	0	GND	5	GND
28	GND	0	GND	4	GND
29	GND	0	GND	3	GND
30	GND	0	GND	2	GND
31	GND	0	GND	1	GND

FHD MAIN ASSY ↔ **FHD RS232C+SR ASSY**

M5 : CN4009 (KM200NA14) ↔ SR1: CN8851 (KM200NA14)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND	0	GND	1	GND
2	V+3_3V_UCOM2	3.3	V+3_3V_UCOM2	2	3.3V power supply for main microcomputer
3	TEMP_AIR	0.4-0.9	TEMP_AIR	3	Outside temperature sensor DC input
4	GND	0	GND	4	GND
5	SR_IN	0-3.3	SR_IN	5	Remote control signal input
6	SR_EN_B	0-3.3	SR_EN_B	6	232C/SR+change signal
7	GND	0	GND	7	GND
8	KEY	0-3.3	KEY	8	Key signal input
9	GND	0	GND	9	GND
10	232C_DET	0～3.3	232C_DET	10	232C detected signal input
11	RXD	0～3.3	RXD	11	RS232C data input/ucom rewriting
12	TXD	0～3.3	TXD	12	RS232C data output/ucom rewriting
13	V+3_3V_STB	3.3	V+3_3V_STB	13	Standby 3.3V power supply
14	V+5_1V_STB	5.1	V+5_1V_STB	14	Standby 5.1V power supply

FHD MAIN ASSY ↔ **FHD FAN CONNECT ASSY**

M6 : CN4003 (AKM1276) ↔ FA1: CN8651 (KM200NA5)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	FAN_VCC	6.5～11.8	FAN_VCC	1	Power supply for FAN
2	FAN_VCC	6.5～11.8	FAN_VCC	2	Power supply for FAN
3	FAN_NG	0	FAN_NG	3	FAN NG signal input
4	GND	0	GND	4	GND
5	GND	0	GND	5	GND

FHD MAIN ASSY — **FHD LED ASSY**

M7 : CN4203 (AKM1274) ⇔ L1: CN8601 (KM200NA3L)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	LED_R	0	LED_R	1	LED control signal (Standby)
2	LED_B	2.9	LED_B	2	LED control signal (power ON)
3	AC_OFF	0	AC_OFF	3	AC_OFF detected signal

FHD MAIN ASSY — **FHD POWER AMP ASSY**

M8 : CN4008 (KM200NA14) ⇔ A2 : CN8002 (KM200NA14)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	A_NG_B	2.8	A_NG_B	1	DC detected signal
2	GND	0	GND	2	GND
3	V+9V_AU	0	V+9V_AU	3	9V power supply for audio (Non-connection termial)
4	GND	0	GND	4	GND
5	V+5V_A	5.0	V+5V_A	5	5V power supply for audio
6	GND	0	GND	6	GND
7	A_STBY_B	3.3	A_STBY_B	7	Audio amplifier standby control signal output
8	A_MUTE	0～2.8	A_MUTE	8	Audio amplifier mute signal output
9	GND	0	GND	9	GND
10	SCL_AUDIO	0～3.3	SCL_AUDIO	10	IIC communication for audios - clock output
11	SDA_AUDIO	0～3.3	SDA_AUDIO	11	IIC communication for audios - data input/output
12	GND	0	GND	12	GND
13	V+3_3V_D	3.3	V+3_3V_D	13	3.3V power supply for audio
14	GND	0	GND	14	GND

FHD MAIN ASSY — **FHD PRE AUDIO ASSY**

M9 : CN6801 (AKP1299) ⇔ PR1 : CN8201 (AKM1359)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	A_MUTE_HDMI	3.3	A_MUTE_HDMI	1	HDMI Voice mute signal
2	SDO	0～3.3	SDO	2	Audio digital data
3	WS	0～3.3	WS	3	Data latch eneburu
4	SCK	0～3.3	SCK	4	Audio data bit clock
5	GND	0	GND	5	GND
6	MCLK	0～3.3	MCLK	6	System clock
7	GND	0	GND	7	GND
8	SP_MUTE	0	SP_MUTE	8	Voice signal (mute signal)
9	M_MODE	0	M_MODE	9	Mode distinction signal of operation
10	SDA_MA5	0～5.0	SDA_MA5	10	IIC communication for audios - data input/output
11	SCL_MA5	0～5.0	SCL_MA5	11	IIC communication for audios - clock output

FHD Y DRIVE ASSY

Y7: CN2355 (AKM1276)

Y9: CN2355 (AKM1276)

FHD ADDRESS A/B ASSY

AD2: CN1701 (AKM1276)

AD2: CN1501 (AKM1276)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	+60V	60	+60V	5	60V power supply
2	GND_ADR	0	GND_ADR	4	GND
3	8V	8	8V	3	8V power supply
4	5V	5	5V	2	5V power supply
5	GND_D	0	GND_D	1	GND

FHD Y DRIVE ASSY

Y6: CN2354 (AKM1281)

Y8: CN2356 (AKM1281)

FHD ADDRESS A/B ASSY

AD2: CN1701 (AKM1276)

AD2: CN1501 (AKM1276)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND_D	0	GND_D	1	GND
2	5V	5	5V	2	5V power supply
3	8V	8	8V	3	8V power supply
4	GND_ADR	0	GND_ADR	4	GND
5	+60V	60	+60V	5	60V power supply
6	+60V	60	+60V	1	60V power supply
7	GND_ADR	0	GND_ADR	2	GND
8	8V	8	8V	3	8V power supply
9	5V	5	5V	4	5V power supply
10	GND_D	0	GND_D	5	GND

FHD Y DRIVE ASSY

Y2: CN2402 (AKM1200)

FHD SCAN B ASSY

SB1: CN2801 (AKP1261)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	VH	130	VH	1	Power supply for VH
2	VH	130	VH	2	Power supply for VH
3	NC	-	NC	3	Non-connection termial
4	NC	-	NC	4	Non-connection termial
5	NC	-	NC	5	Non-connection termial
6	GNDH	-60 ～ 300	GNDH	6	GND(PSUS)
7	SI_H	-60 ～ 300	SI_H	7	SI_H signal
8	CLR	-60 ～ 300	CLR	8	CLR signal
9	OC2	-60 ～ 300	OC2	9	OC2 signal
10	OC1	-60 ～ 300	OC1	10	OC1 signal
11	CLK1	-60 ～ 300	CLK1	11	CLK1 signal
12	LE	-60 ～ 300	LE	12	LE signal
13	GNDH	-60 ～ 300	GNDH	13	GND(PSUS)
14	GNDH_R	-60 ～ 300	GNDH_R	14	GND(PSUS). Connector detection
15	IC5V	-60 ～ 300	IC5V	15	IC5V power supply

FHD Y DRIVE ASSY
Y3: CN2401 (AKM1200) ↔ **FHD SCAN A ASSY**
SA1: CN2701 (AKP1261)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	VH	130	VH	1	Power supply for VH
2	VH	130	VH	2	Power supply for VH
3	NC	-	NC	3	Non-connection termial
4	NC	-	NC	4	Non-connection termial
5	NC	-	NC	5	Non-connection termial
6	GNDH	-60 ～ 300	GNDH	6	GND(PSUS)
7	SI_L	-60 ～ 300	SI_L	7	SI_L signal
8	CLR	-60 ～ 300	CLR	8	CLR signal
9	OC2	-60～300	OC2	9	OC2 signal
10	OC1	-60～300	OC1	10	OC1 signal
11	CLK2	-60～300	CLK2	11	CLK2 signal
12	LE	-60～300	LE	12	LE signal
13	GNDH	-60～300	GNDH	13	GND(PSUS)
14	GNDH_R	-60～300	GNDH_R	14	GND(PSUS).Connector detection
15	IC5V	-60～300	IC5V	15	IC5V power supply

FHD Y DRIVE ASSY
Y4: CN2351 (B9B-EH) ↔ **POWER SUPPLY UNIT**
P1: (B9B-EH)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	NC	-	NC	1	Non-connection termial
2	+16_5V	16.5	+16_5V	2	16.5V power supply
3	+6_5V	6.5	+6_5V	3	6.5V power supply
4	GND_D	0	GND_D	4	GND
5	GND_SUS	0	GND_SUS	5	GND
6	GND_SUS	0	GND_SUS	6	GND
7	NC	-	NC	7	Non-connection termial
8	VSUS	205	VSUS	8	VSUS power supply
9	VSUS	205	VSUS	9	VSUS power supply

FHD Y DRIVE ASSY
Y5 : CN2353 (AKM1277) ↔ **POWER SUPPLY UNIT**
P7: (B7B-PH-K-S)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	+60V	60	+60V	1	60V power supply
2	+60V	60	+60V	2	60V power supply
3	NC	-	NC	3	Non-connection termial
4	GND_ADR	0	GND_ADR	4	GND
5	+12V	12	+12V	5	12V power supply
6	GND_D	0	GND_D	6	GND
			NC	7	Non-connection termial

FHD X DRIVE ASSY
X2: (CN1206 B8B-EH) ↔ **POWER SUPPLY UNIT**
P2: (B8B-EH)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	+16_5V	16.5	+16_5V	1	16.5V power supply
2	+6_5V	6.5	+6_5V	2	6.5V power supply
3	GND_D	0	GND_D	3	GND
4	GND_SUS	0	GND_SUS	4	GND
5	GND_SUS	0	GND_SUS	5	GND
6	NC	-	NC	6	Non-connection termial
7	VSUS	205	VSUS	7	VSUS power supply
8	VSUS	205	VSUS	8	VSUS power supply

FHD X DRIVE ASSY ⟷ **POWER SUPPLY UNIT**

X5: CN1204 (AKM1277) ⟷ P6: (B6B-PH-K-S)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	+60V	60	+60V	1	60V power supply
2	+60V	60	+60V	2	60V power supply
3	NC	-	NC	3	Non-connection termial
4	GND_ADR	0	GND_ADR	4	GND
5	+12V	12	+12V	5	12V power supply
6	GND_D	0	GND_D	6	GND

FHD X DRIVE ASSY ⟷ **FHD ADDRESS A/B ASSY**

X4: CN1202 (AKM1276) ⟷ AD2: CN1501 (AKM1276)

X7: CN1205 (AKM1276) AD2: CN1701 (AKM1276)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	+60V	60	+60V	5	60V power supply
2	GND_ADR	0	GND_ADR	4	GND
3	8V	8	8V	3	8V power supply
4	5V	5	5V	2	5V power supply
5	GND_D	0	GND_D	1	GND

FHD X DRIVE ASSY ⟷ **FHD ADDRESS A/B ASSY**

X3: CN1201 (AKM1281) ⟷ AD2: CN1501 (AKM1276)

X6: CN1203 (AKM1281) AD2: CN1701 (AKM1276)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	GND_D	0	GND_D	1	GND
2	5V	5	5V	2	5V power supply
3	8V	8	8V	3	8V power supply
4	GND_ADR	0	GND_ADR	4	GND
5	+60V	60	+60V	5	60V power supply
6	+60V	60	+60V	1	60V power supply
7	GND_ADR	0	GND_ADR	2	GND
8	8V	8	8V	3	8V power supply
9	5V	5	5V	4	5V power supply
10	GND_D	0	GND_D	5	GND

FHD POWER AMP ASSY ⟷ **POWER SUPPLY UNIT**

A1: CN8001 (B3P-VH) ⟷ P5: - (B3P-VH)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	V+16_5V	16.5	16.5V	1	16.5V power supply
2	GNDP	0	GND-D	2	GND
3	GNDP	0	GND-D	3	GND

FHD POWER AMP ASSY ⟷ **FHD PRE AUDIO ASSY**

A3: CN8003 (KM200NA15) ⟷ PR2: CN8202 (KM200NA15)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	V+3_3V_D	3.3	V+3_3V_D	1	3.3V power supply for audio
2	GND	0	GND	2	GND
3	V+5V_A	5	V+5V_A	3	5V power supply for audio
4	GND	0	GND	4	GND
5	V+9V_AU	9	V+9V_AU	5	9V power supply for audio
6	GND	0	GND	6	GND
7	V+12V	12	V+12V	7	12V power supply for audio
8	GND_A	0	GND_A	8	GND
9	AUDIO_L+	2.2 ～ 9.6	AUDIO_L+	9	small signal L+ ch
10	GND_A	0	GND_A	10	GND
11	AUDIO_L-	2.2～9.6	AUDIO_L-	11	small signal L- ch
12	GND_A	0	GND_A	12	GND
13	AUDIO_R+	2.2～9.6	AUDIO_R+	13	small signal R+ ch
14	GND_A	0	GND_A	14	GND
15	AUDIO_R-	2.2～9.6	AUDIO_R-	15	small signal R- ch

FHD POWER AMP ASSY ⟷ **FHD SP LR1 (LR2) ASSY**

A4: CN8004 (B6B-EH) ⟷ SP1: CN8401 (B3B-EH)

*SP LR1 ASS'Y and SP LR2 ASS'Y can be replaced.

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	L-	0	LR1-	1	POWER AMP output L-
2	L+	0	LR1+	2	POWER AMP output L+
3	GNDP	0	GNDP	3	GND

FHD POWER AMP ASSY ⟷ **FHD SP LR2 (LR1 ASSY**

A4: CN8004 (B6B-EH) ⟷ SP2: CN8401 (B3B-EH)

*SP LR1 ASS'Y and SP LR2 ASS'Y can be replaced.

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
4	R-	0	LR2-	1	POWER AMP output R-
5	R+	0	LR2+	2	POWER AMP output R+
6	GNDP	0	GNDP	3	GND

FHD SP LR1 (LR2) ASSY ⟷ **SPEAKER L**

SP3: CN8402 (AKE1041-)

*SP LR1 ASS'Y and SP LR2 ASS'Y can be replaced.

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	SP-	0 ～16.5	-	-	SPEAKER output L-
2	SP+	0 ～16.5	-	-	SPEAKER output L+

FHD SP LR2 (LR1) ASSY ⟷ **SPEAKER R**

SP4: CN8502 (AKE1041-)

*SP LR1 ASS'Y and SP LR2 ASS'Y can be replaced.

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	SP-	0 ～16.5	-	-	SPEAKER output R-
2	SP+	0 ～16.5	-	-	SPEAKER output R+

FHD FAN CONNECT ASSY ↔ **FAN**

FA2: CN8652 (KM200NA3) ↔ AXM1055

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	FAN_VCC	6.5-11.8	FAN_VCC	1	Power supply for FAN
2	FAN_NG	0	FAN_NG	2	FAN NG signal input
3	GND	0	GND	3	GND

FHD FAN CONNECT ASSY ↔ **FAN**

FA3: CN8653 (KM200NA3) ↔ AXM1056

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	FAN_VCC	6.5-11.8	FAN_VCC	1	Power supply for FAN
2	FAN_NG	0	FAN_NG	2	FAN NG signal input
3	GND	0	GND	3	GND

FHD FAN CONNECT ASSY ↔ **FAN**

FA4: CN8654 (KM200NA3) ↔ AXM1056

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	FAN_VCC	6.5-11.8	FAN_VCC	1	Power supply for FAN
2	FAN_NG	0	FAN_NG	2	FAN NG signal input
3	GND	0	GND	3	GND

FHD FAN CONNECT ASSY ↔ **FAN**

FA5: CN8655 (KM200NA3) ↔ AXM1055

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	FAN_VCC	6.5-11.8	FAN_VCC	1	Power supply for FAN
2	FAN_NG	0	FAN_NG	2	FAN NG signal input
3	GND	0	GND	3	GND

FHD RS232C+SR ASSY ↔ **FHD KEY CONTROL ASSY**

SR2: CN8852 (KM200NA6) ↔ KL1: CN8801 (KM200NA3)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	V+3_3V_STB	3.3	V+3_3V_STB	1	Standby 3.3V power supply
2	KEY	0-3.3	KEY	2	Key signal input
3	GND_SR	0	GND_SR	3	GND

FHD RS232C+SR ASSY ↔ **FHD IR ASSY**

SR2: CN8852 (KM200NA6) ↔ RE1: CN8701 (AKM1290)

Pin No.	Name	Voltage [V]	Name	Pin No.	Function
4	V+3_3V_STB	3.3	V+3_3V_STB	1	Standby 3.3V power supply
5	GND_SR	0	GND_SR	2	GND
6	REM_B	0-3.3	REM_B	3	Remote control signal input
-	-	-	NC	4	Non-connection termial

FHD KEY CONTROL ASSY ↔ **FHD KEY ASSY**

KL2: CN8802 (AKM1207) ↔ SW1: CN8751 (AKM1207)

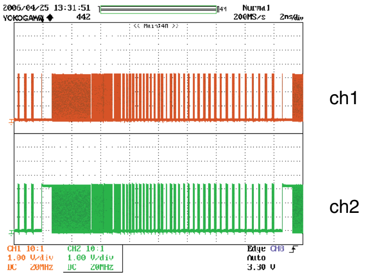
Pin No.	Name	Voltage [V]	Name	Pin No.	Function
1	D7	0 ～ 3.3	D7	8	KEY SCAN signal
2	D6	0 ～ 3.3	D6	7	KEY SCAN signal
3	D5	0 ～ 3.3	D5	6	KEY SCAN signal
4	G0	0 ～ 3.3	G0	5	KEY SCAN signal
5	G1	0 ～ 3.3	G1	4	KEY SCAN signal
6	G2	0 ～ 3.3	G2	3	KEY SCAN signal
7	G3	0 ～ 3.3	G3	2	KEY SCAN signal
8	GND_KEY	0	GND_KEY	1	GND

4.11 WAVEFORMS

● 50FHD ADDRESS ASSY

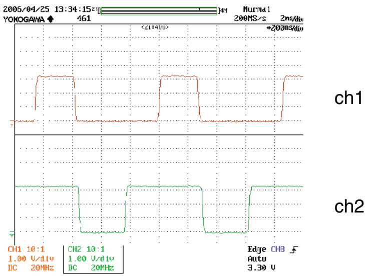
- ADR RESONANCE BLOCK

① input:VIDEO 60Hz
signal : COLOR BAR(MKSS17)
ch1 : ADR_B side-A test plane " B "
ch2 : ADR_D side-A test plane " D "
V : 1V/div H : 2ms/div



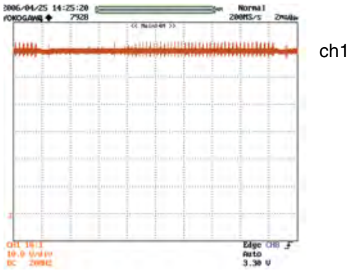
- Control signals of resonance circuit (1 Field)

② input :VIDEO 60Hz
signal : COLOR BAR (MKSS17)
ch1 : ADR_B side-A test plane " B "
ch2 : ADR_D side-A test plane " D "
V : 1V/div H : 200ns/div



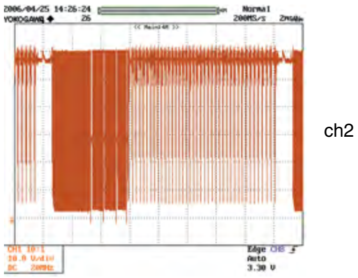
- Control signals of resonance circuit (2SF)

③ input :VIDEO 60Hz
signal :COLOR BAR(MKSS17)
ch1 :L1601(V+ADR5)(side-A through hole)
V : 10V/div H : 2ms/div



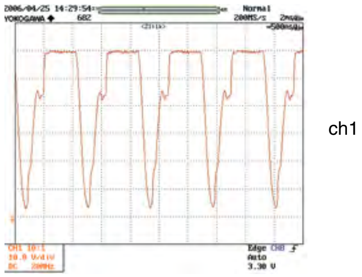
- VADR (1 Field)

④ input :VIDEO 60Hz
signal : Checkered pattern of Black- White (MKSS13)
ch1 : L1601(V+ADR5)(side-A through hole)
V: 10V/div H: 2ms/div



- VADR (1 Field)

⑤ input : VIDEO 60Hz
signal : Checkered pattern of Black- White(MKSS13)
ch1 : L1601(V+ADR5)(side-A through hole)
V: 10V/div H: 500ns/div

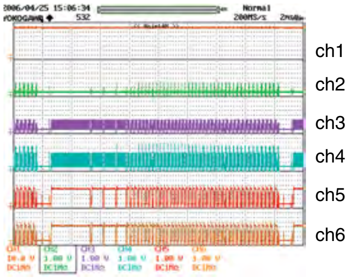


- VADR (2 SF)

50FHD ADDRESS ASSY

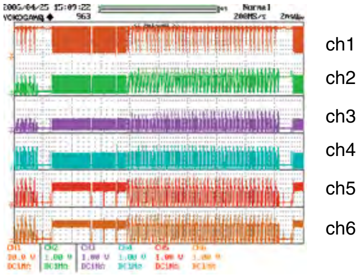
• ADR LOGIC BLOCK

① input:VIDEO 60Hz
signal : COLOR BAR(MKSS17)
ch1 : L1601(V+ADR5) (side-A through hole)
V : 10V/div H : 2ms/div
ch2 : IC1501 25pin (R_E) side-A test plane "R_E"
V : 1V/div H : 2ms/div
ch3 : IC1501 36pin (CLK) side-A test plane "CLK1"
V : 1V/div H : 2ms/div
ch4 : IC1501 29pin (LE_E) side-A test plane "LE_E"
V : 1V/div H : 2ms/div
ch5 : IC1501 43pin (HBLK) side-A test plane "HBLK"
V : 1V/div H : 2ms/div
ch6 : IC1501 42pin (LBLK) side-A test plane "LBLK"
V : 1V/div H : 2ms/div



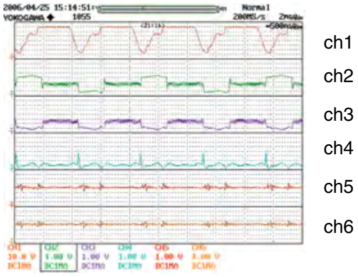
• Incoming signals of TCP(1Field)

② input: VIDEO 60Hz
signal : Checkered pattern of Black- White (MKSS13)
CH1 : L1601 (V+ADR5) (side-A through hole)
V : 10V/div H : 2ms/div
CH2 : IC1501 25pin (R_E) side-A test plane "R_E"
V : 1V/div H : 2ms/div
CH3 : IC1501 36pin (CLK) side-A test plane "CLK1"
V : 1V/div H : 2ms/div
CH4 : IC1501 29pin (LE_E) side-A test plane "LE_E"
V : 1V/div H : 2ms/div
CH5 : IC1501 43pin (HBLK) side-A test plane "HBLK"
V : 1V/div H : 2ms/div
CH6 : IC1501 42pin (LBLK) side-A test plane "LBLK"
V : 1V/div H : 2ms/div



• Incoming signals of TCP (1Field)

③ input : VIDEO
signal:Checkered pattern of Black- White (MKSS13)
CH1 : L1601(V+ADR5)(side-A through hole)
V : 10V/div H : 500ns/div
CH2 : IC1501 25pin (R_E) side-A test plane "R_E"
V : 1V/div H : 500ns/div
CH3 : IC1501 36pin (CLK) side-A test plane "CLK1"
V : 1V/div H : 500ns/div
CH4 : IC1501 29pin (LE_E) side-A test plane "LE_E"
V : 1V/div H : 500ns/div
CH5 : IC1501 43pin (HBLK) side-A test plane "HBLK"
V : 1V/div H : 500ns/div
CH6 : IC1501 42pin (LBLK) side-A test plane "LBLK"
V : 1V/div H : 500ns/div

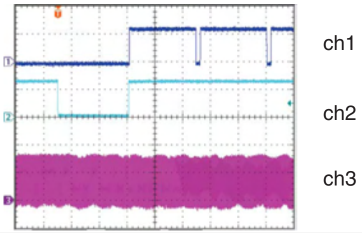


• Incoming signals of TCP (Resonance part)

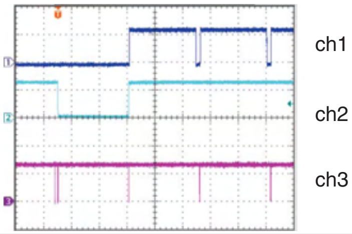
FHD DIGITAL ASSY

• LVDS RX BLOCK

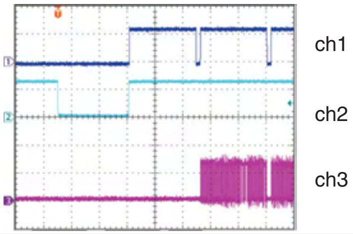
① CH1 : IC3001 47pin (LVL_DE)
CH2 : IC3001 45pin (LVL_VD)
CH3 : IC3001 31pin (LVL_CLK)
V : 2V/Div H : 4uS/Div



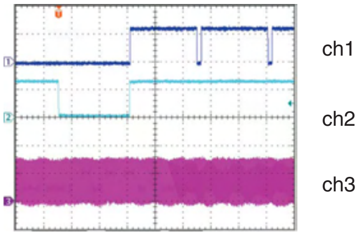
② CH1 : IC3001 47pin (LVL_DE)
CH2 : IC3001 45pin (LVL_VD)
CH3 : IC3001 46pin (LVL_HD)
V : 2V/Div H : 4uS/Div



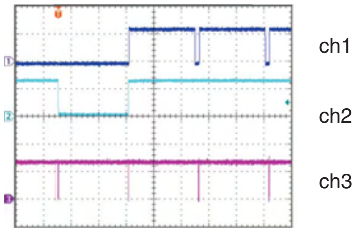
③ CH1 : IC3001 47pin (LVL_DE)
CH2 : IC3001 45pin (LVL_VD)
CH3 : IC3001 33pin (LVL_RA0)
V : 2V/DIV H : 4uS/DIV



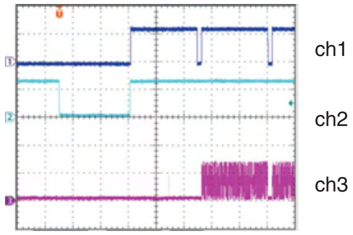
④ CH1 : IC3002 47pin (LVR_DE)
CH2 : IC3002 45pin (LVR_VD)
CH3 : IC3002 31pin (LVR_CLK)
V : 2V/DIV H : 4uS/DIV



⑤ CH1 : IC3002 47pin (LVR_DE)
CH2 : IC3002 45pin (LVR_VD)
CH3 : IC3002 46pin (LVR_HD)
V : 2V/DIV H : 4uS/DIV

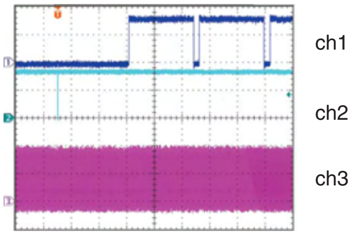


⑥ CH1 : IC3002 47pin (LVR_DE)
CH2 : IC3002 45pin (LVR_VD)
CH3 : IC3002 33pin (LVR_RA0)
V : 2V/DIV H : 4uS/DIV

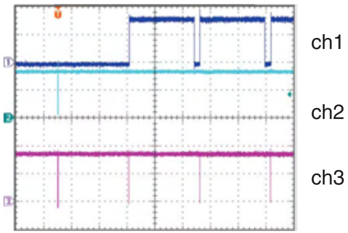


• SQ ASIC-L BLOCK

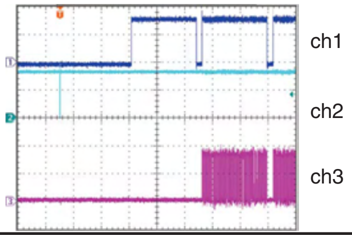
⑦ CH1 : R3129 3-4pin (AL_DE)
CH2 : R3129 5-6pin (AL_VD)
CH3 : R3154 (AL_CLK)
V : 2V/DIV H : 4uS/DIV



⑧ CH1 : R3129 3-4pin (AL_DE)
CH2 : R3129 5-6pin (AL_VD)
CH3 : R3129 7-8pin (AL_HD)
V : 2V/DIV H : 4uS/DIV

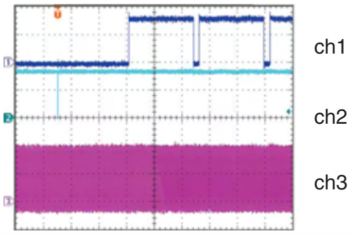


⑨ CH1 : R3129 3-4pin (AL_DE)
CH2 : R3129 5-6pin (AL_VD)
CH3 : R3132 5-6pin (AL_RA0)
V : 2V/DIV H : 4uS/DIV

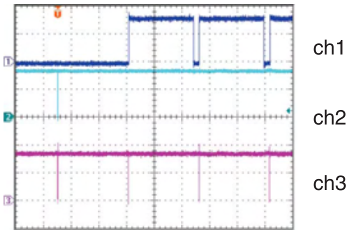


• SQ ASIC-R BLOCK

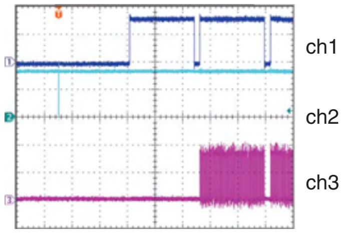
⑩ CH1 : R3148 5-6pin (AR_DE)
CH2 : R3148 1-2pin (AR_VD)
CH3 : R3155 (AR_CLK)
V : 2V/DIV H : 4uS/DIV



⑪ CH1 : R3148 5-6pin (AR_DE)
CH2 : R3148 1-2pin (AR_VD)
CH3 : R3148 3-4pin (AR_HD)
V : 2V/DIV H : 4uS/DIV

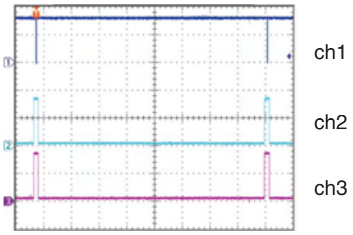


⑫ CH1 : R3148 5-6pin (AR_DE)
CH2 : R3148 1-2pin (AR_VD)
CH3 : R3145 5-6pin (AR_RA0)
V : 2V/DIV H : 4uS/DIV



• MODULE UCOM BLOCK

⑬ CH1 : IC3703 1pin (V_SYNC)
CH2 : IC3704 11pin (AL_STOP_SQ)
CH3 : IC3704 8pin (AR_STOP_SQ)
V : 2V/DIV H : 2mS/DIV

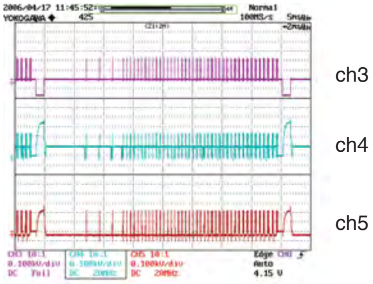


● 50FHD X DRIVE ASSY, 50FHD Y DRIVE ASSY, 50FHD SCAN A ASSY, 50FHD SCAN B ASSY

① ch3 R1222(XPSUS) - K1201(SUSGND)
V : 100V/div H : 2ms/div
(50FHD X DRIVE Ass'y)

ch4 K2818(ScanOUT) - K2301(SUSGND)
V : 100V/div H : 2ms/div
(50FHD SCAN B Ass'y HIGHSIDE)

ch5 R2288(YPSUS) - KN2203(SUSGND)
V : 100V/div H : 2ms/div
(50FHD Y DRIVE Ass'y)



④ ch1 R2401(LE) - K2014(DGND)
V : 1V/div H : 2ms/div

ch2 R2404(CLK2) - K2014(DGND)
V : 1V/div H : 2ms/div

ch3 R2406(SI_L) - K2014(DGND)
V : 1V/div H : 2ms/div

ch4 R2409(CLR) - K2014(DGND)
V : 1V/div H : 2ms/div

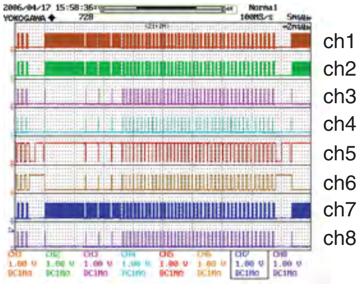
ch5 R2411(OC2_U) - K2014(DGND)
V : 1V/div H : 2ms/div

ch6 R2415(OC1) - K2014(DGND)
V : 1V/div H : 2ms/div

ch7 R2418(CLK1) - K2014(DGND)
H : 2ms/div

ch8 R2420(SI_H) - K2014(DGND)
H : 2ms/div

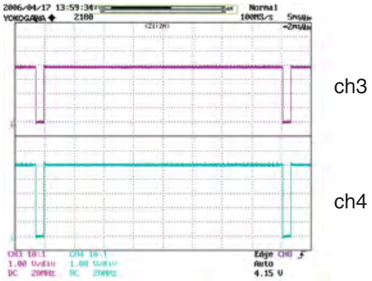
(50FHD Y DRIVE Ass'y)



② ch3 K1012(XSUS-MSK) - K1002(DGND)
V : 1V/div H : 2ms/div

ch4 K1008(XNR-D) - K1002(DGND)
V : 1V/div H : 2ms/div

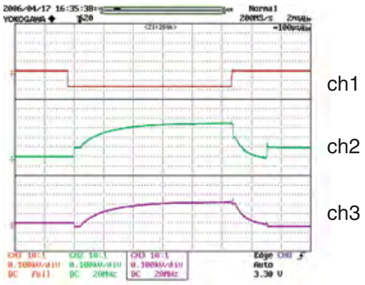
(50FHD X DRIVE Ass'y)



⑤ ch1 R1222(XPSUS) - K1201(SUSGND)
V : 100V/div H : 100us/div
(50FHD X DRIVE Ass'y)

ch2 K2818(ScanOUT) - K2301(SUSGND)
V : 100V/div H : 100us/div
(50FHD SCAN B Ass'y HIGHSIDE)

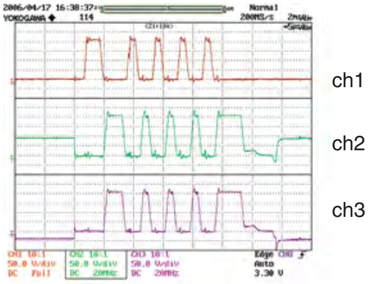
ch3 F2301(YPSUS) - KN2206(SUSGND)
V : 100V/div H : 100us/div
(Y DRIVE Ass'y)



⑥ ch1 R1222(XPSUS) - K1202(SUSGND)
V : 50V/div H : 5us/div
(50FHD X DRIVE Ass'y)

ch2 K2818(ScanOUT) - K2301(SUSGND)
V : 50V/div H : 5us/div
(50FHD SCAN A Ass'y LOWSIDE)

ch3 F2301(YPSUS) - K2301(SUSGND)
V : 50V/div H : 5us/div
(50FHD Y DRIVE Ass'y)



③ ch1 K2007(YNOFS) - K2014(DGND)
V : 1V/div H : 2ms/div

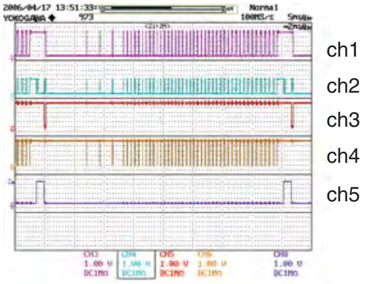
ch2 K2005(YSUS-MSK) - K2014(DGND)
V : 1V/div H : 2ms/div

ch3 K2004(YNRST) - K2014(DGND)
V : 1V/div H : 2ms/div

ch4 K2003(SOFT-D) - K2014(DGND)
V : 1V/div H : 2ms/div

ch5 K2010(YPR-U) - K2014(DGND)
V : 1V/div H : 2ms/div

(50FHD Y DRIVE Ass'y)



⑦ ch1 F2301(YPSUS) - K2301(SUSGND)
V : 50V/div H : 500ns/div

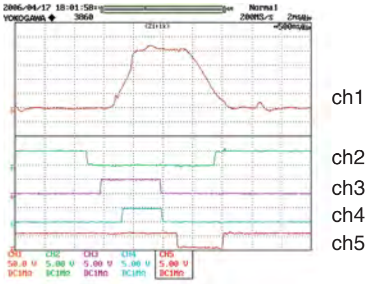
ch2 K2002(YSUS-G) - K2014(DGND)
V : 5V/div H : 500ns/div

ch3 K2013(YSUS-U) - K2014(DGND)
V : 5V/div H : 500ns/div

ch4 K2011(YSUS-B) - K2014(DGND)
V : 5V/div H : 500ns/div

ch5 K2012(YSUS-D) - K2014(DGND)
V : 5V/div H : 500ns/div

(50FHD Y DRIVE Ass'y)

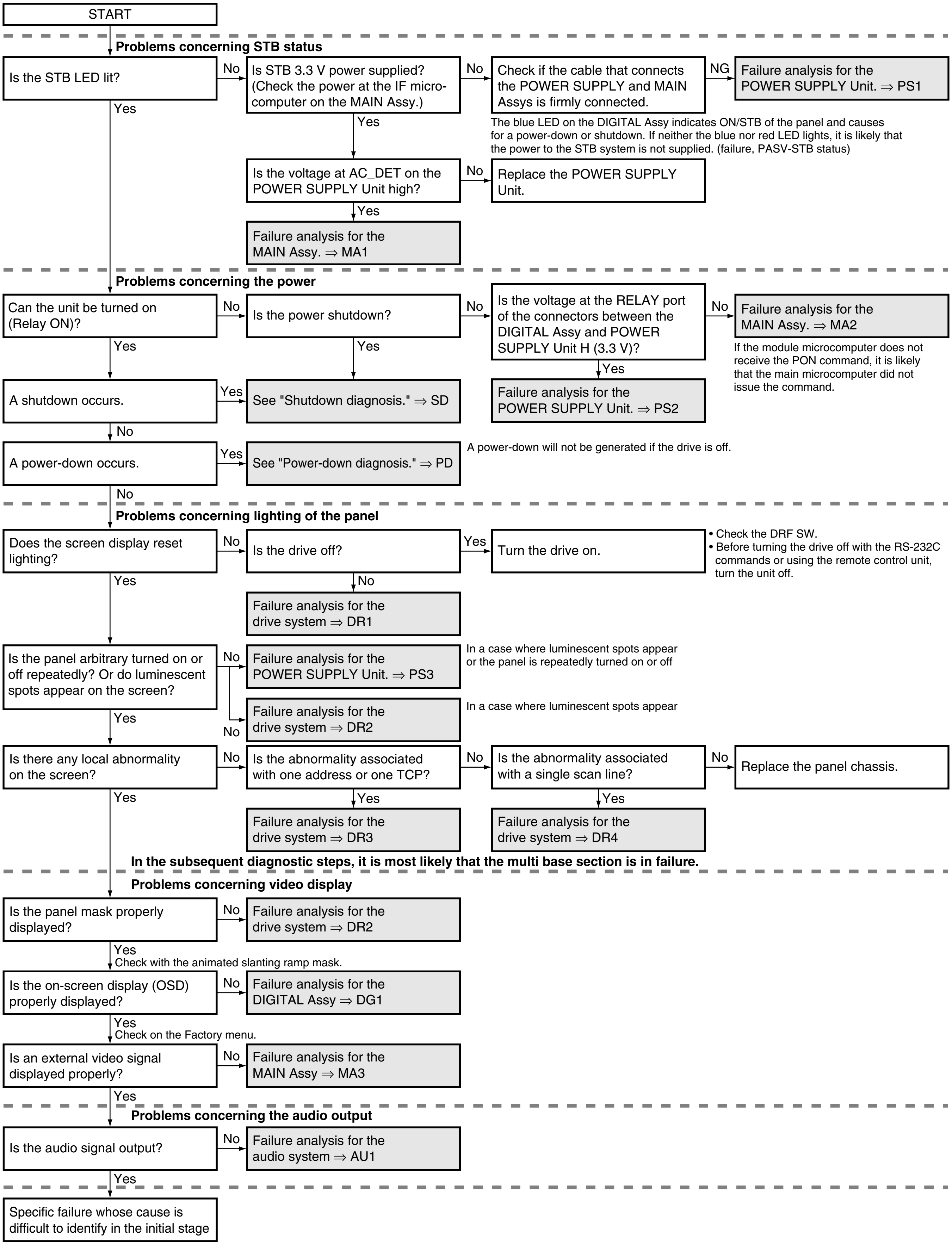


5. DIAGNOSIS INFORMATION

5.1 THE FLOW OF DIAGNOSIS

5.1.1 FLOWCHART OF FAILURE ANALYSIS FOR THE WHOLE UNIT

Flowchart of Failure Analysis for The Whole Unit


START
Problems concerning STB status
Is the STB LED lit?
No
Is STB 3.3 V power supplied? (Check the power at the IF micro-computer on the MAIN Assy.)
No
Check if the cable that connects the POWER SUPPLY and MAIN Assys is firmly connected.
NG
Failure analysis for the POWER SUPPLY Unit. ⇒ PS1
Yes
Yes
Is the voltage at AC_DET on the POWER SUPPLY Unit high?
No
Replace the POWER SUPPLY Unit.
Yes
Failure analysis for the MAIN Assy. ⇒ MA1
Problems concerning the power
Can the unit be turned on (Relay ON)?
No
Is the power shutdown?
No
Is the voltage at the RELAY port of the connectors between the DIGITAL Assy and POWER SUPPLY Unit H (3.3 V)?
No
Failure analysis for the MAIN Assy. ⇒ MA2
Yes
Yes
Yes
Failure analysis for the POWER SUPPLY Unit. ⇒ PS2
A shutdown occurs.
Yes
See "Shutdown diagnosis." ⇒ SD
No
A power-down occurs.
Yes
See "Power-down diagnosis." ⇒ PD
No
Problems concerning lighting of the panel
Does the screen display reset lighting?
No
Is the drive off?
Yes
Turn the drive on.
No
Failure analysis for the drive system ⇒ DR1
Yes
Is the panel arbitrary turned on or off repeatedly? Or do luminescent spots appear on the screen?
No
Failure analysis for the POWER SUPPLY Unit. ⇒ PS3
No
Failure analysis for the drive system ⇒ DR2
Yes
Is there any local abnormality on the screen?
No
Is the abnormality associated with one address or one TCP?
No
Is the abnormality associated with a single scan line?
No
Replace the panel chassis.
Yes
Yes
Failure analysis for the drive system ⇒ DR3
Failure analysis for the drive system ⇒ DR4
Yes
In the subsequent diagnostic steps, it is most likely that the multi base section is in failure.
Problems concerning video display
Is the panel mask properly displayed?
No
Failure analysis for the drive system ⇒ DR2
Yes
Is the on-screen display (OSD) properly displayed?
No
Failure analysis for the DIGITAL Assy ⇒ DG1
Yes
Is an external video signal displayed properly?
No
Failure analysis for the MAIN Assy ⇒ MA3
Yes
Problems concerning the audio output
Is the audio signal output?
No
Failure analysis for the audio system ⇒ AU1
Yes
Specific failure whose cause is difficult to identify in the initial stage

The blue LED on the DIGITAL Assy indicates ON/STB of the panel and causes for a power-down or shutdown. If neither the blue nor red LED lights, it is likely that the power to the STB system is not supplied. (failure, PASV-STB status)

If the module microcomputer does not receive the PON command, it is likely that the main microcomputer did not issue the command.

A power-down will not be generated if the drive is off.

- Check the DRF SW.
- Before turning the drive off with the RS-232C commands or using the remote control unit, turn the unit off.

In a case where luminescent spots appear or the panel is repeatedly turned on or off

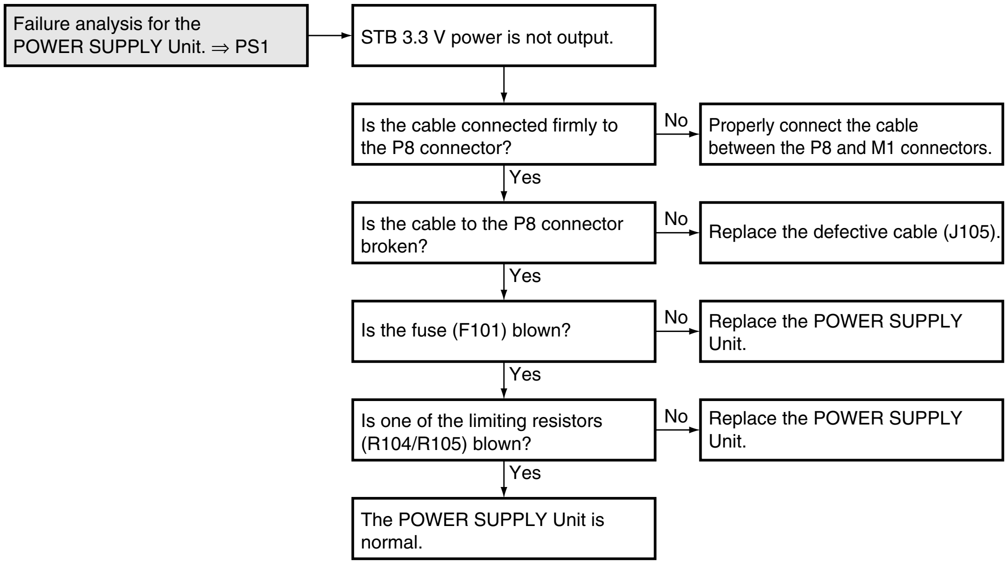
In a case where luminescent spots appear

Check with the animated slanting ramp mask.

Check on the Factory menu.

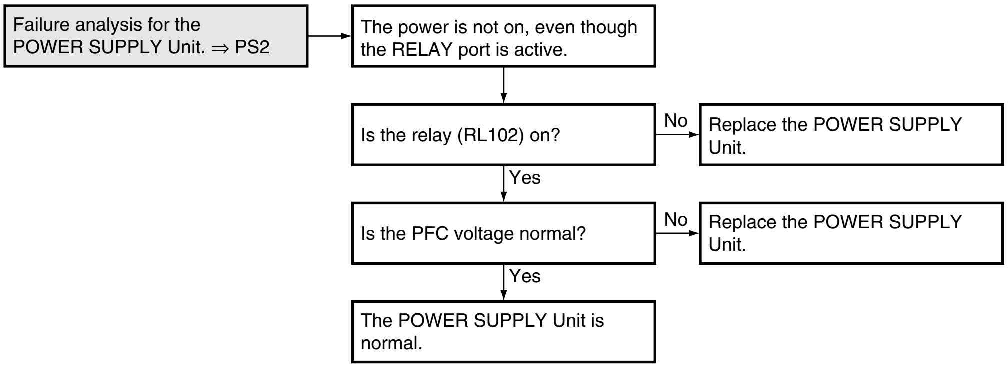
5.1.2 FLOWCHART OF FAILURE ANALYSIS FOR THE POWER SUPPLY UNIT

Flowchart of Failure Analysis for The POWER SUPPLY Unit


Failure analysis for the POWER SUPPLY Unit. ⇒ PS1
STB 3.3 V power is not output.
Is the cable connected firmly to the P8 connector?
No
Properly connect the cable between the P8 and M1 connectors.
Yes
Is the cable to the P8 connector broken?
No
Replace the defective cable (J105).
Yes
Is the fuse (F101) blown?
No
Replace the POWER SUPPLY Unit.
Yes
Is one of the limiting resistors (R104/R105) blown?
No
Replace the POWER SUPPLY Unit.
Yes
The POWER SUPPLY Unit is normal.

Check the voltage at the DIGITAL Assy and POWER SUPPLY Unit.

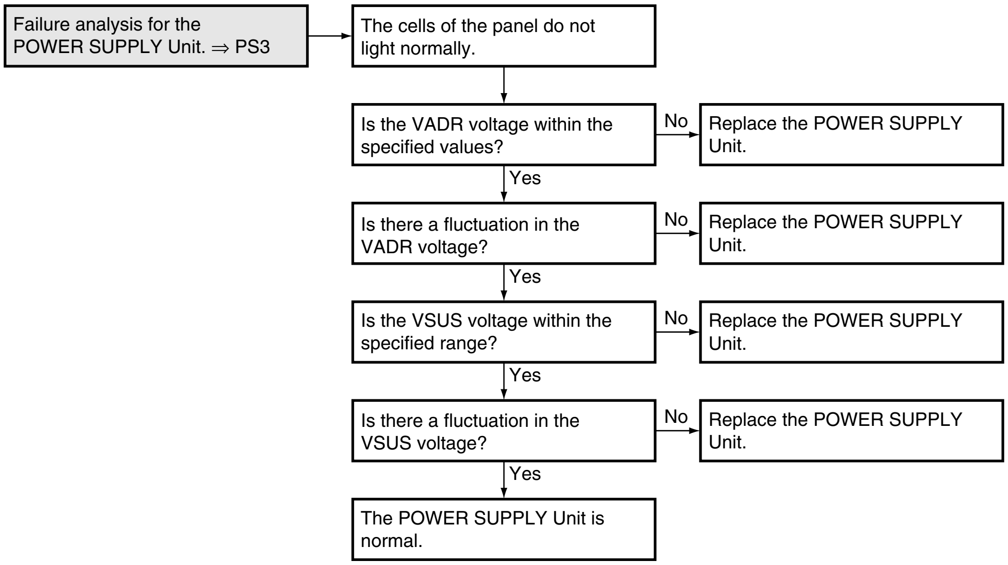
Check the resistance between L102 (lead nearest R104) and the D121 anode, using a tester.


Failure analysis for the POWER SUPPLY Unit. ⇒ PS2
The power is not on, even though the RELAY port is active.
Is the relay (RL102) on?
No
Replace the POWER SUPPLY Unit.
Yes
Is the PFC voltage normal?
No
Replace the POWER SUPPLY Unit.
Yes
The POWER SUPPLY Unit is normal.

- Check the relay operation at the terminal (Pin 11 of P4). (Voltage: 3.3 V)
- Check the relay sound (click).

- Check the voltage between the D204 cathode and RC101 (negative) terminal.
- The voltage must be around 390 V (failure if it is 340 V or less).

Caution: High voltage!


Failure analysis for the POWER SUPPLY Unit. ⇒ PS3
The cells of the panel do not light normally.
Is the VADR voltage within the specified values?
No
Replace the POWER SUPPLY Unit.
Yes
Is there a fluctuation in the VADR voltage?
No
Replace the POWER SUPPLY Unit.
Yes
Is the VSUS voltage within the specified range?
No
Replace the POWER SUPPLY Unit.
Yes
Is there a fluctuation in the VSUS voltage?
No
Replace the POWER SUPPLY Unit.
Yes
The POWER SUPPLY Unit is normal.

The specified voltage values are between 57 and 63 V.

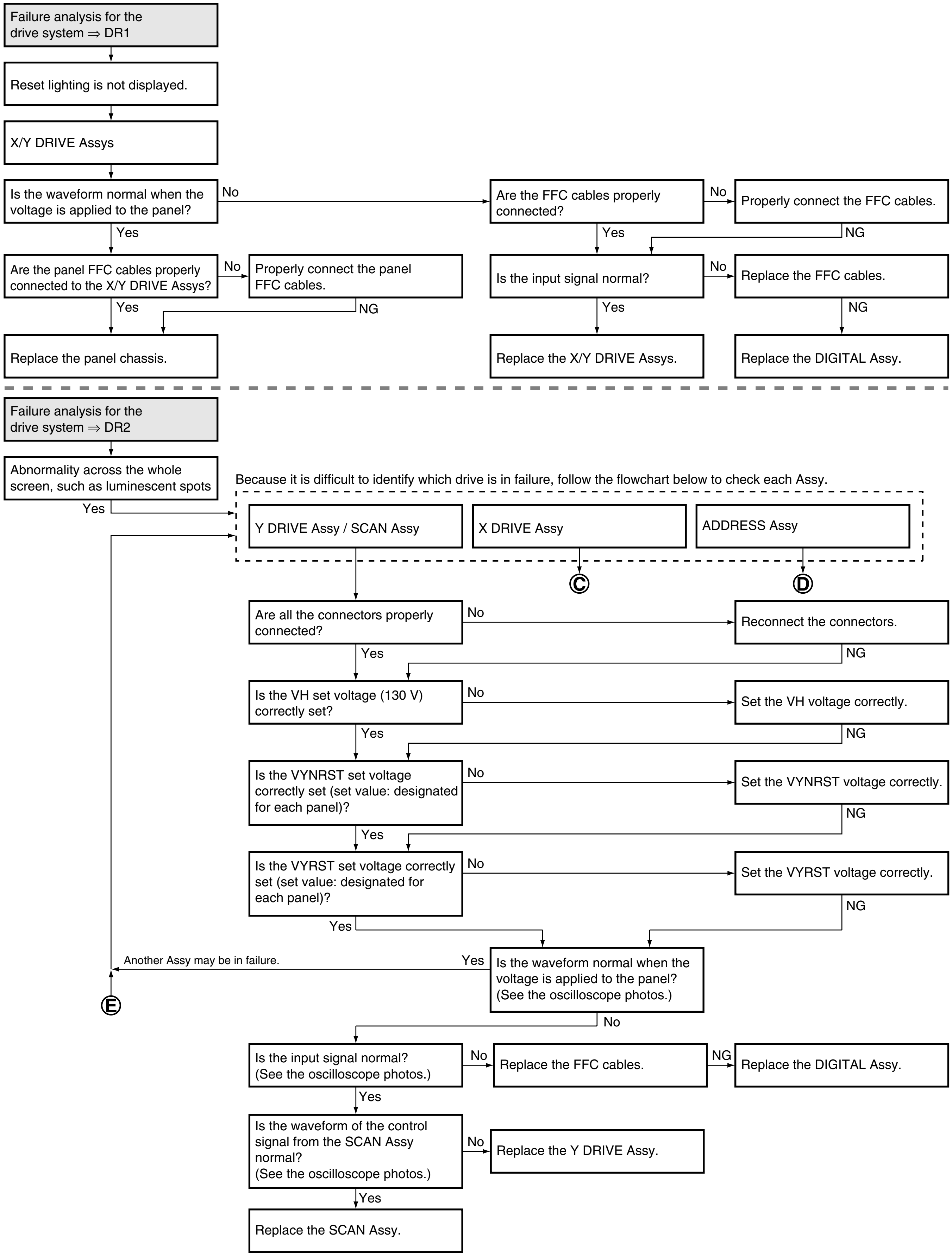
The ripple must be within 5 V.

The specified voltage values are between 200 and 210 V (VSU: 125/35°C).

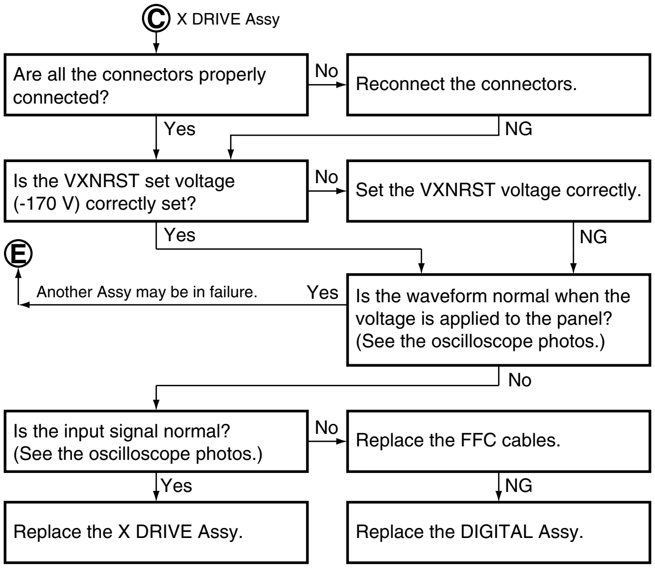
The ripple must be within 10 V.

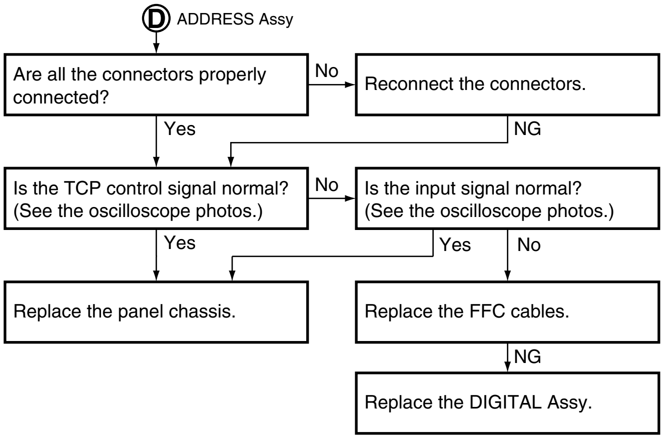
5.1.3 FLOWCHART OF FAILURE ANALYSIS FOR THE DRIVE ASSY

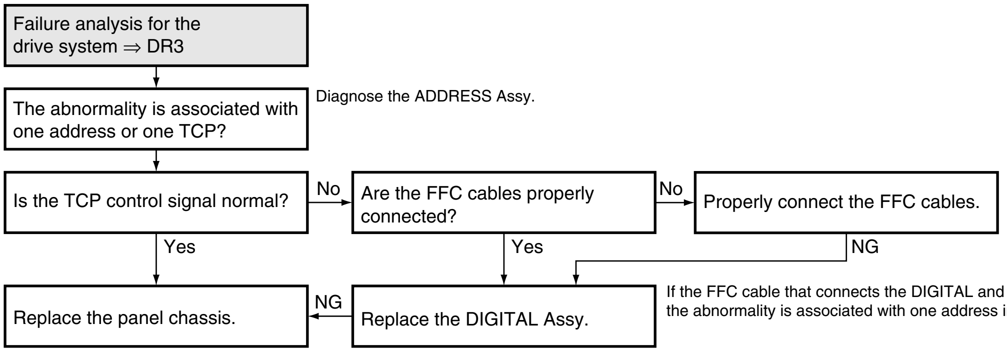
Flowchart of Failure Analysis for The Drive Assy (1)


Failure analysis for the drive system ⇒ DR1
Reset lighting is not displayed.
X/Y DRIVE Assys
Is the waveform normal when the voltage is applied to the panel?
No
Are the FFC cables properly connected?
No
Properly connect the FFC cables.
Yes
NG
Yes
Are the panel FFC cables properly connected to the X/Y DRIVE Assys?
No
Properly connect the panel FFC cables.
Is the input signal normal?
No
Replace the FFC cables.
Yes
NG
Yes
NG
Replace the panel chassis.
Replace the X/Y DRIVE Assys.
Replace the DIGITAL Assy.
Failure analysis for the drive system ⇒ DR2
Abnormality across the whole screen, such as luminescent spots
Because it is difficult to identify which drive is in failure, follow the flowchart below to check each Assy.
Yes
Y DRIVE Assy / SCAN Assy
X DRIVE Assy
ADDRESS Assy
Ⓒ
Ⓓ
Are all the connectors properly connected?
No
Reconnect the connectors.
Yes
NG
Is the VH set voltage (130 V) correctly set?
No
Set the VH voltage correctly.
Yes
NG
Is the VYNRST set voltage correctly set (set value: designated for each panel)?
No
Set the VYNRST voltage correctly.
Yes
NG
Is the VYRST set voltage correctly set (set value: designated for each panel)?
No
Set the VYRST voltage correctly.
Yes
NG
Another Assy may be in failure.
Yes
Is the waveform normal when the voltage is applied to the panel? (See the oscilloscope photos.)
Ⓔ
No
Is the input signal normal? (See the oscilloscope photos.)
No
Replace the FFC cables.
NG
Replace the DIGITAL Assy.
Yes
Is the waveform of the control signal from the SCAN Assy normal? (See the oscilloscope photos.)
No
Replace the Y DRIVE Assy.
Yes
Replace the SCAN Assy.

Flowchart of Failure Analysis for The Drive Assy (2)

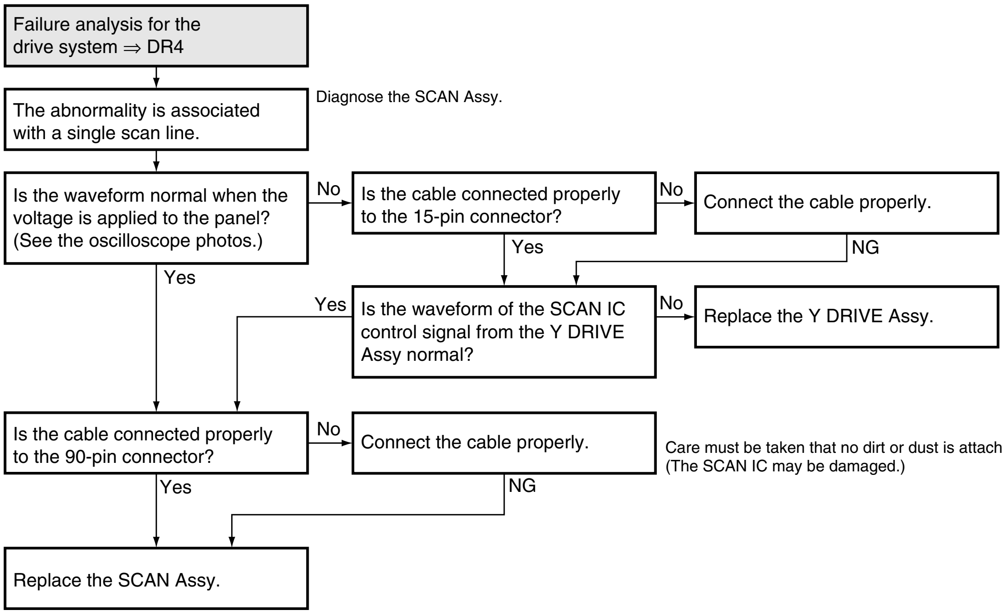

C X DRIVE Assy
Are all the connectors properly connected?
No
Reconnect the connectors.
Yes
NG
Is the VXNRST set voltage (-170 V) correctly set?
No
Set the VXNRST voltage correctly.
Yes
NG
E
Another Assy may be in failure.
Yes
Is the waveform normal when the voltage is applied to the panel? (See the oscilloscope photos.)
No
Is the input signal normal? (See the oscilloscope photos.)
No
Replace the FFC cables.
Yes
NG
Replace the X DRIVE Assy.
Replace the DIGITAL Assy.


D ADDRESS Assy
Are all the connectors properly connected?
No
Reconnect the connectors.
Yes
NG
Is the TCP control signal normal? (See the oscilloscope photos.)
No
Is the input signal normal? (See the oscilloscope photos.)
Yes
Yes
No
Replace the panel chassis.
Replace the FFC cables.
NG
Replace the DIGITAL Assy.


Failure analysis for the drive system ⇒ DR3
The abnormality is associated with one address or one TCP?
Diagnose the ADDRESS Assy.
Is the TCP control signal normal?
No
Are the FFC cables properly connected?
No
Properly connect the FFC cables.
Yes
Yes
NG
Replace the panel chassis.
NG
Replace the DIGITAL Assy.

If the FFC cable that connects the DIGITAL and ADDRESS Assys is in failure, the abnormality is associated with one address in most cases.

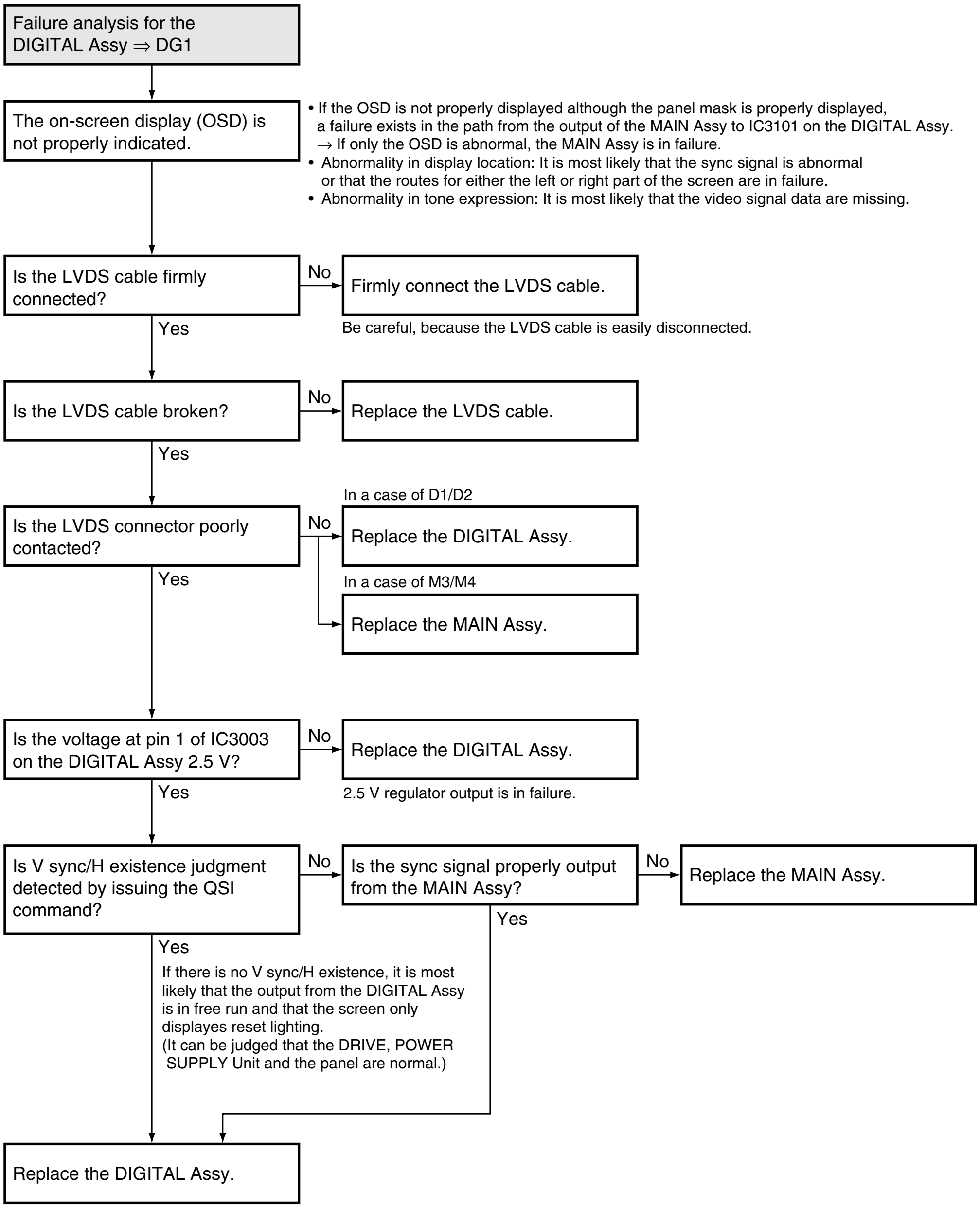
In most cases of damage on one line, the panel chassis must be replaced.


Failure analysis for the drive system ⇒ DR4
The abnormality is associated with a single scan line.
Diagnose the SCAN Assy.
Is the waveform normal when the voltage is applied to the panel? (See the oscilloscope photos.)
No
Is the cable connected properly to the 15-pin connector?
No
Connect the cable properly.
Yes
NG
Yes
Yes
Is the waveform of the SCAN IC control signal from the Y DRIVE Assy normal?
No
Replace the Y DRIVE Assy.
Is the cable connected properly to the 90-pin connector?
No
Connect the cable properly.
Yes
NG
Replace the SCAN Assy.

Care must be taken that no dirt or dust is attached or gets in.
(The SCAN IC may be damaged.)

5.1.4 FLOWCHART OF FAILURE ANALYSIS FOR THE DIGITAL ASSY

Flowchart of Failure Analysis for The DIGITAL Assy


Failure analysis for the DIGITAL Assy ⇒ DG1
The on-screen display (OSD) is not properly indicated.
Is the LVDS cable firmly connected?
No
Firmly connect the LVDS cable.
Yes
Is the LVDS cable broken?
No
Replace the LVDS cable.
Yes
In a case of D1/D2
Is the LVDS connector poorly contacted?
No
Replace the DIGITAL Assy.
Yes
In a case of M3/M4
Replace the MAIN Assy.
Is the voltage at pin 1 of IC3003 on the DIGITAL Assy 2.5 V?
No
Replace the DIGITAL Assy.
Yes
Is V sync/H existence judgment detected by issuing the QSI command?
No
Is the sync signal properly output from the MAIN Assy?
No
Replace the MAIN Assy.
Yes
Yes
Replace the DIGITAL Assy.

- If the OSD is not properly displayed although the panel mask is properly displayed, a failure exists in the path from the output of the MAIN Assy to IC3101 on the DIGITAL Assy.
  → If only the OSD is abnormal, the MAIN Assy is in failure.
- Abnormality in display location: It is most likely that the sync signal is abnormal or that the routes for either the left or right part of the screen are in failure.
- Abnormality in tone expression: It is most likely that the video signal data are missing.

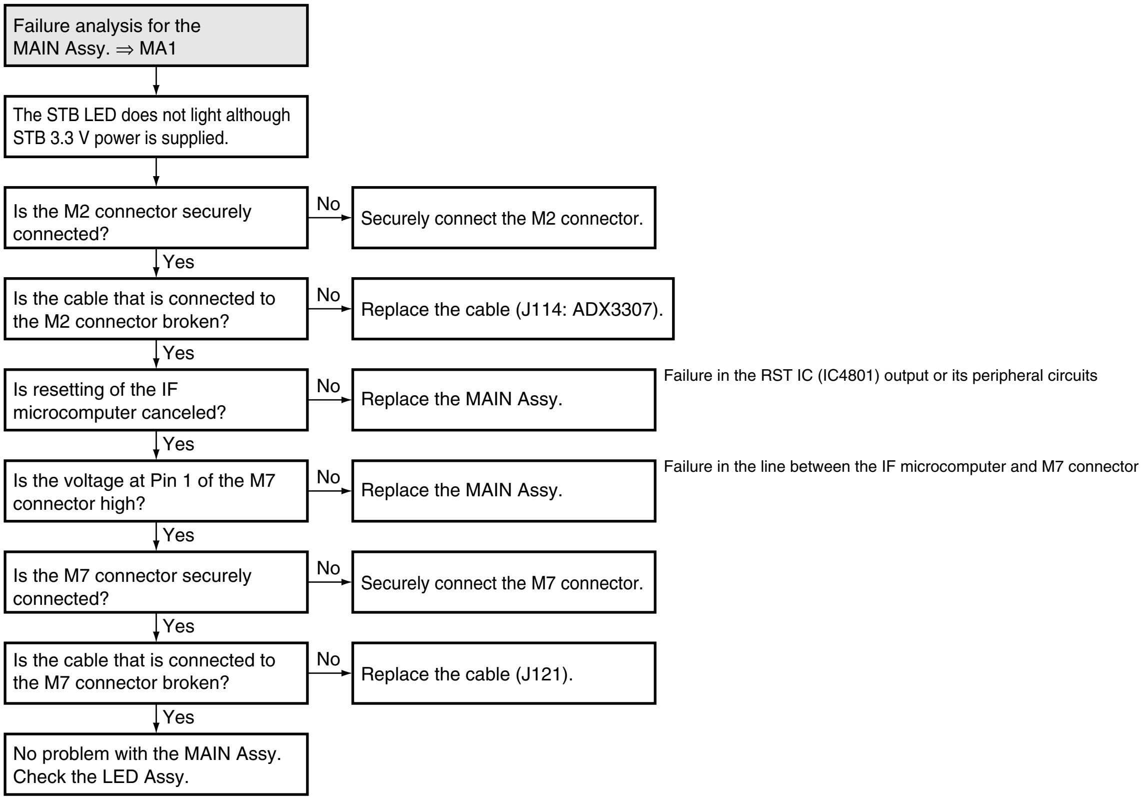
Be careful, because the LVDS cable is easily disconnected.

2.5 V regulator output is in failure.

If there is no V sync/H existence, it is most likely that the output from the DIGITAL Assy is in free run and that the screen only displayes reset lighting.
(It can be judged that the DRIVE, POWER SUPPLY Unit and the panel are normal.)

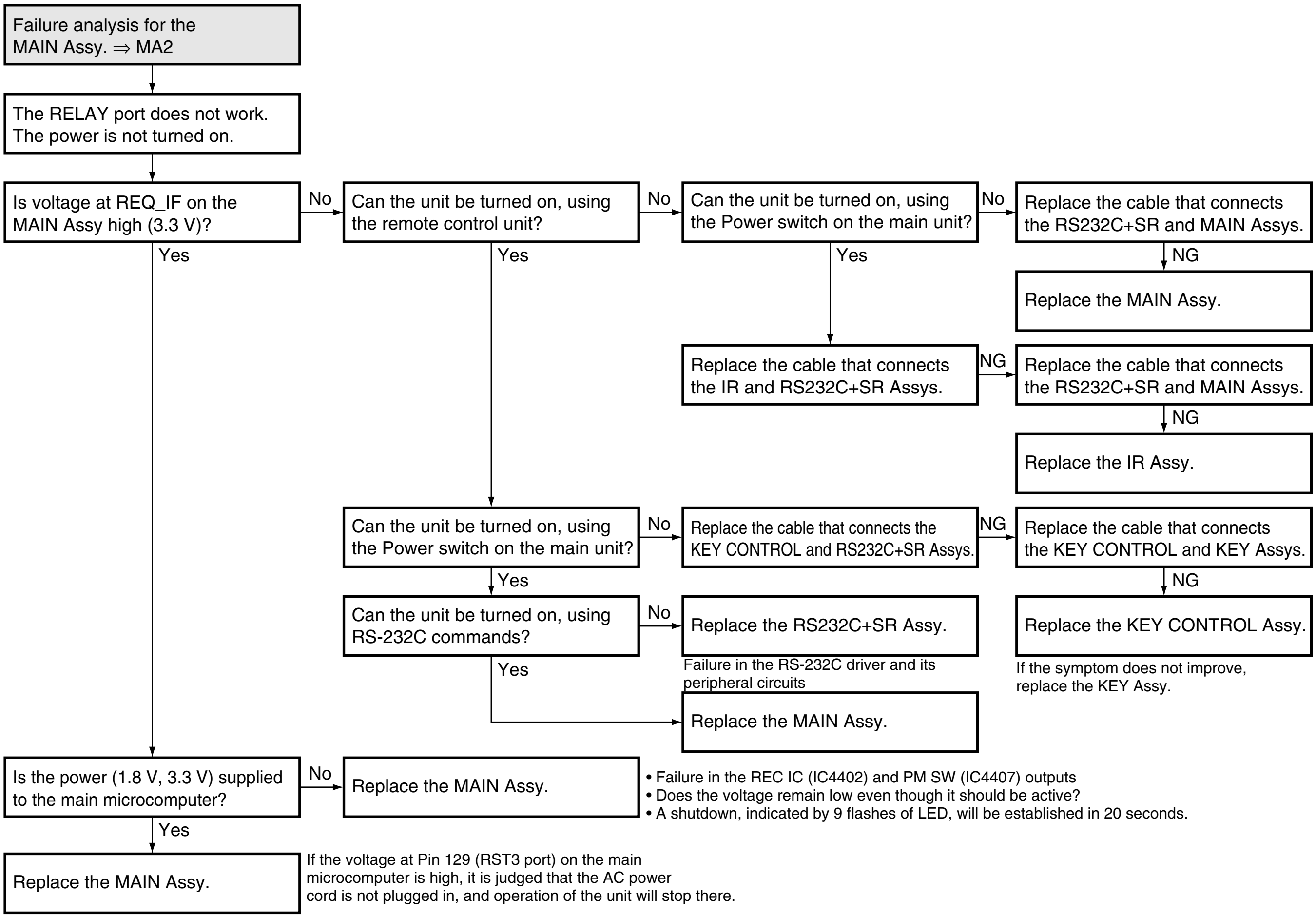
5.1.5 FLOWCHART OF FAILURE ANALYSIS FOR THE MAIN ASSY

Flowchart of Failure Analysis for The MAIN Assy (1)


Failure analysis for the MAIN Assy. ⇒ MA1
The STB LED does not light although STB 3.3 V power is supplied.
Is the M2 connector securely connected?
No
Securely connect the M2 connector.
Yes
Is the cable that is connected to the M2 connector broken?
No
Replace the cable (J114: ADX3307).
Yes
Is resetting of the IF microcomputer canceled?
No
Replace the MAIN Assy.
Yes
Is the voltage at Pin 1 of the M7 connector high?
No
Replace the MAIN Assy.
Yes
Is the M7 connector securely connected?
No
Securely connect the M7 connector.
Yes
Is the cable that is connected to the M7 connector broken?
No
Replace the cable (J121).
Yes
No problem with the MAIN Assy. Check the LED Assy.

Failure in the RST IC (IC4801) output or its peripheral circuits

Failure in the line between the IF microcomputer and M7 connector


Failure analysis for the MAIN Assy. ⇒ MA2
The RELAY port does not work. The power is not turned on.
Is voltage at REQ_IF on the MAIN Assy high (3.3 V)?
No
Can the unit be turned on, using the remote control unit?
No
Can the unit be turned on, using the Power switch on the main unit?
No
Replace the cable that connects the RS232C+SR and MAIN Assys.
NG
Replace the MAIN Assy.
Yes
Replace the cable that connects the IR and RS232C+SR Assys.
NG
Replace the cable that connects the RS232C+SR and MAIN Assys.
NG
Replace the IR Assy.
Yes
Can the unit be turned on, using the Power switch on the main unit?
No
Replace the cable that connects the KEY CONTROL and RS232C+SR Assys.
NG
Replace the cable that connects the KEY CONTROL and KEY Assys.
NG
Replace the KEY CONTROL Assy.
Yes
Can the unit be turned on, using RS-232C commands?
No
Replace the RS232C+SR Assy.
Yes
Replace the MAIN Assy.
Yes
Is the power (1.8 V, 3.3 V) supplied to the main microcomputer?
No
Replace the MAIN Assy.
Yes
Replace the MAIN Assy.

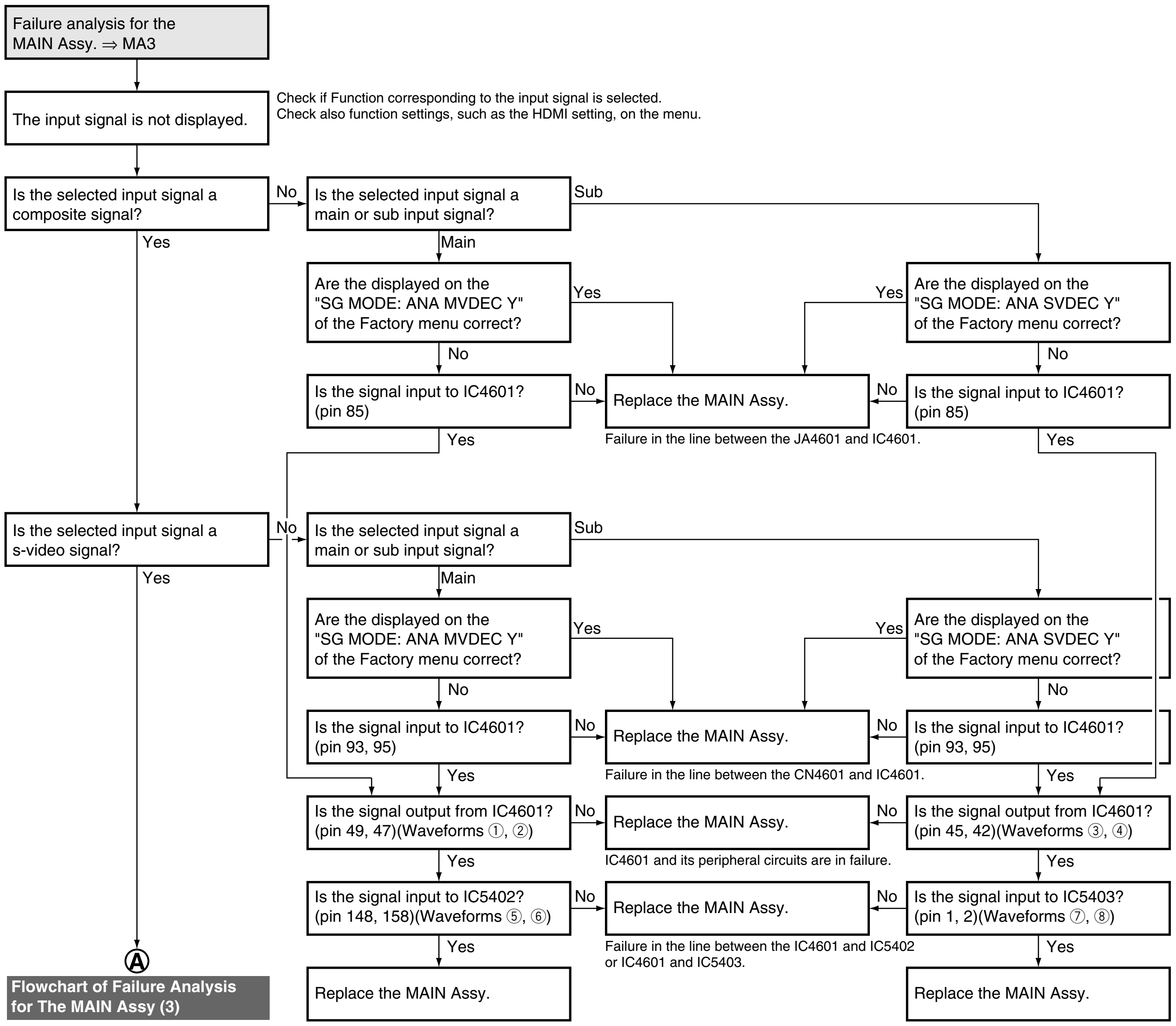
Failure in the RS-232C driver and its peripheral circuits

If the symptom does not improve, replace the KEY Assy.

- Failure in the REC IC (IC4402) and PM SW (IC4407) outputs
- Does the voltage remain low even though it should be active?
- A shutdown, indicated by 9 flashes of LED, will be established in 20 seconds.

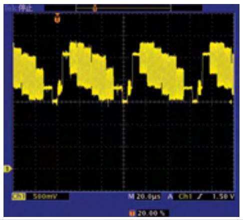
If the voltage at Pin 129 (RST3 port) on the main microcomputer is high, it is judged that the AC power cord is not plugged in, and operation of the unit will stop there.

Flowchart of Failure Analysis for The MAIN Assy (2)

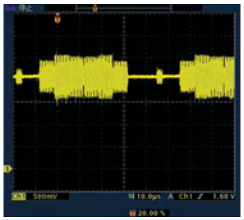

Failure analysis for the MAIN Assy. ⇒ MA3
The input signal is not displayed.
Check if Function corresponding to the input signal is selected.
Check also function settings, such as the HDMI setting, on the menu.
Is the selected input signal a composite signal?
No
Yes
Is the selected input signal a main or sub input signal?
Sub
Main
Are the displayed on the "SG MODE: ANA MVDEC Y" of the Factory menu correct?
Yes
No
Are the displayed on the "SG MODE: ANA SVDEC Y" of the Factory menu correct?
Yes
No
Is the signal input to IC4601? (pin 85)
No
Yes
Replace the MAIN Assy.
Failure in the line between the JA4601 and IC4601.
Is the signal input to IC4601? (pin 85)
No
Yes
Is the selected input signal a s-video signal?
No
Yes
Is the selected input signal a main or sub input signal?
Sub
Main
Are the displayed on the "SG MODE: ANA MVDEC Y" of the Factory menu correct?
Yes
No
Are the displayed on the "SG MODE: ANA SVDEC Y" of the Factory menu correct?
Yes
No
Is the signal input to IC4601? (pin 93, 95)
No
Yes
Replace the MAIN Assy.
Failure in the line between the CN4601 and IC4601.
Is the signal input to IC4601? (pin 93, 95)
No
Yes
Is the signal output from IC4601? (pin 49, 47)(Waveforms ①, ②)
No
Yes
Replace the MAIN Assy.
IC4601 and its peripheral circuits are in failure.
Is the signal output from IC4601? (pin 45, 42)(Waveforms ③, ④)
No
Yes
Is the signal input to IC5402? (pin 148, 158)(Waveforms ⑤, ⑥)
No
Yes
Replace the MAIN Assy.
Failure in the line between the IC4601 and IC5402 or IC4601 and IC5403.
Is the signal input to IC5403? (pin 1, 2)(Waveforms ⑦, ⑧)
No
Yes
Ⓐ
Flowchart of Failure Analysis for The MAIN Assy (3)
Replace the MAIN Assy.
IC5402 and its peripheral circuits are in failure.
Replace the MAIN Assy.
IC5403 and its peripheral circuits are in failure.

• Waveforms

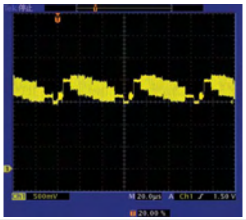
① **IC4601 - pin 49**
V: 500 mV/div H: 20 µsec/div



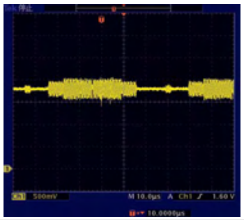
② **IC4601 - pin 47**
V: 500 mV/div H: 20 µsec/div



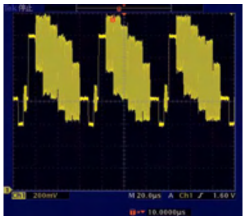
③ **IC4601 - pin 45**
V: 500 mV/div H: 20 µsec/div



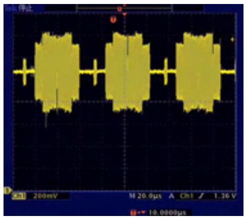
④ **IC4601 - pin 42**
V: 500 mV/div H: 10 µsec/div



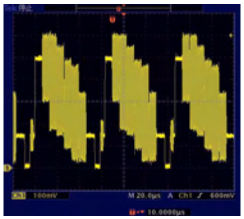
⑤ **IC5402 - pin 148**
V: 200 mV/div H: 20 µsec/div



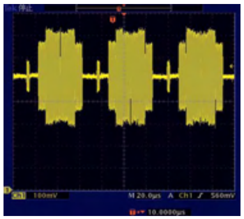
⑥ **IC5402 - pin 158**
V: 200 mV/div H: 20 µsec/div



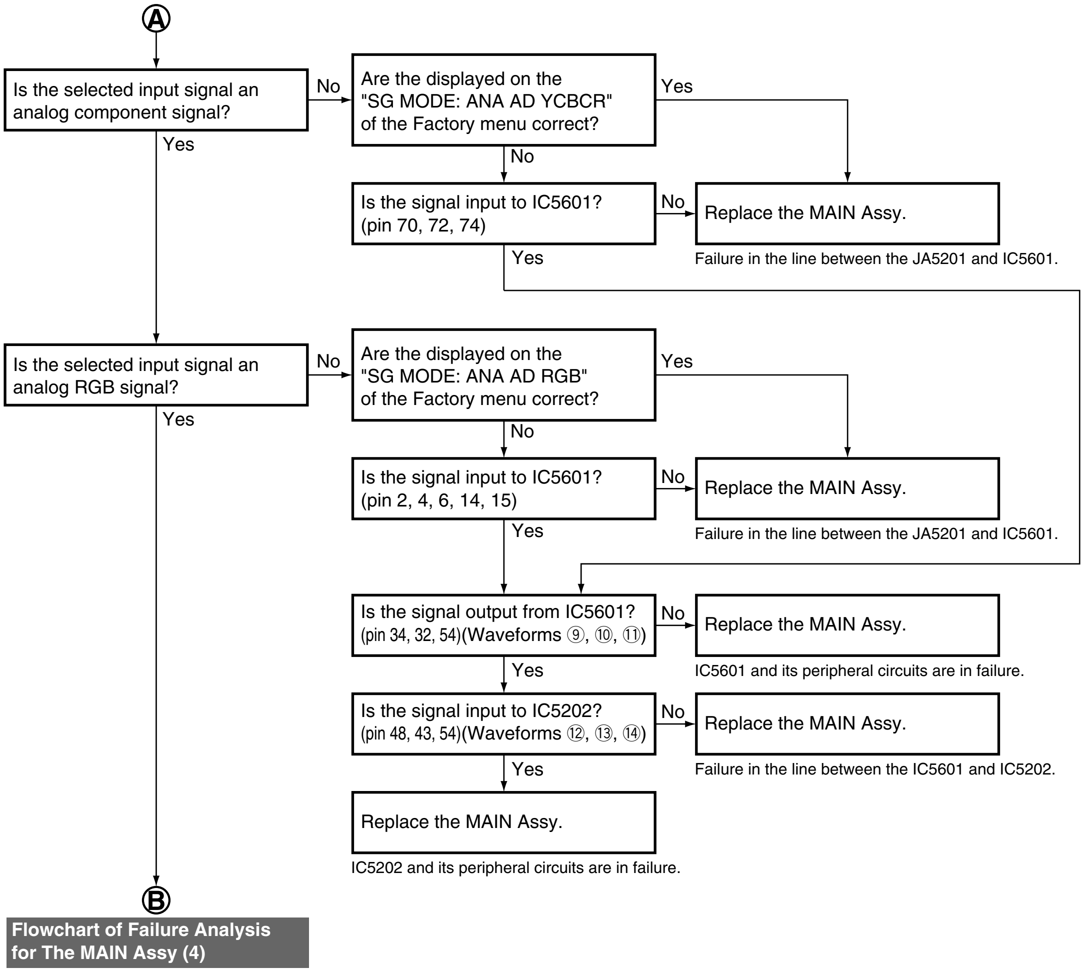
⑦ **IC5403 - pin 1**
V: 100 mV/div H: 20 µsec/div



⑧ **IC5403 - pin 2**
V: 100 mV/div H: 20 µsec/div

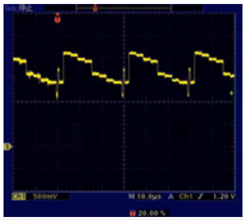


Flowchart of Failure Analysis for The MAIN Assy (3)

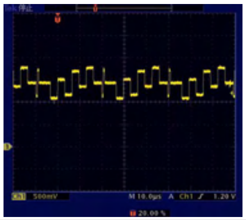

A
Is the selected input signal an analog component signal?
No
Are the displayed on the "SG MODE: ANA AD YCBCR" of the Factory menu correct?
Yes
No
Is the signal input to IC5601? (pin 70, 72, 74)
No
Replace the MAIN Assy.
Failure in the line between the JA5201 and IC5601.
Yes
Yes
Is the selected input signal an analog RGB signal?
No
Are the displayed on the "SG MODE: ANA AD RGB" of the Factory menu correct?
Yes
No
Is the signal input to IC5601? (pin 2, 4, 6, 14, 15)
No
Replace the MAIN Assy.
Failure in the line between the JA5201 and IC5601.
Yes
Yes
Is the signal output from IC5601? (pin 34, 32, 54)(Waveforms ⑨, ⑩, ⑪)
No
Replace the MAIN Assy.
IC5601 and its peripheral circuits are in failure.
Yes
Is the signal input to IC5202? (pin 48, 43, 54)(Waveforms ⑫, ⑬, ⑭)
No
Replace the MAIN Assy.
Failure in the line between the IC5601 and IC5202.
Yes
Replace the MAIN Assy.
IC5202 and its peripheral circuits are in failure.
B
Flowchart of Failure Analysis for The MAIN Assy (4)

• Waveforms

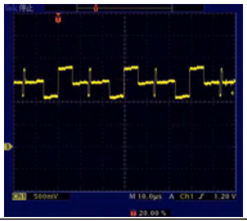
⑨ **IC5601 - pin 34**
V: 500 mV/div H: 10 μsec/div



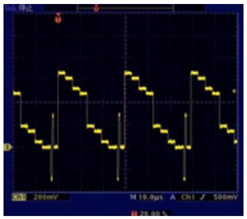
⑩ **IC5601 - pin 32**
V: 500 mV/div H: 10 μsec/div



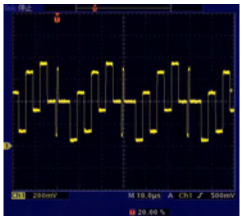
⑪ **IC5601 - pin 30**
V: 500 mV/div H: 10 μsec/div



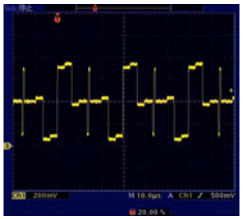
⑫ **IC5202 - pin 48**
V: 200 mV/div H: 10 μsec/div



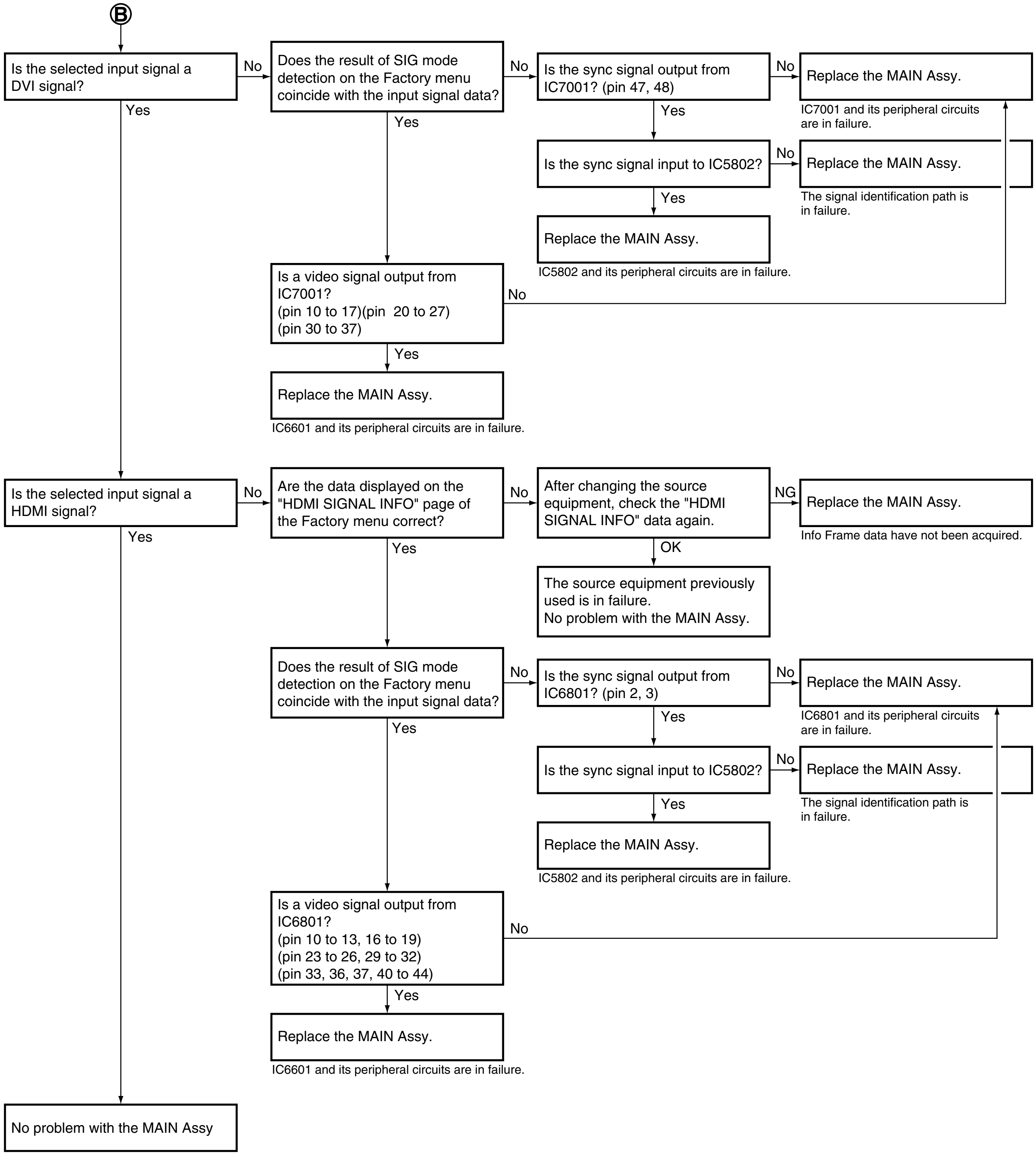
⑬ **IC5202 - pin 43**
V: 200 mV/div H: 10 μsec/div



⑭ **IC5202 - pin 54**
V: 100 mV/div H: 10 μsec/div

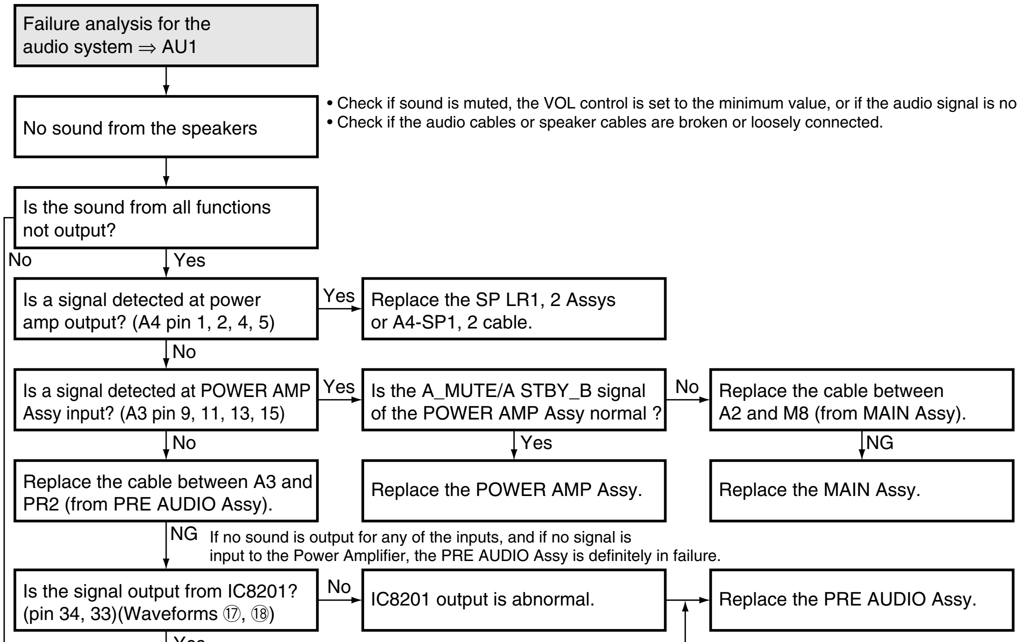


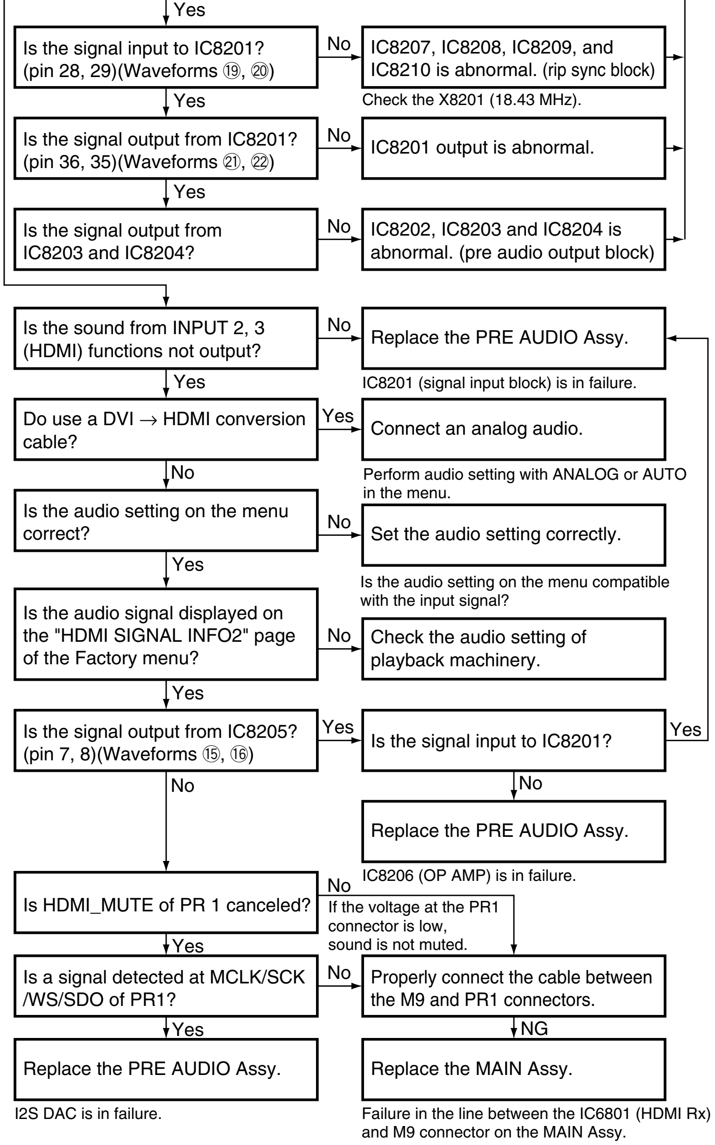
Flowchart of Failure Analysis for The MAIN Assy (4)


B
Is the selected input signal a DVI signal?
No
Yes
Does the result of SIG mode detection on the Factory menu coincide with the input signal data?
No
Yes
Is the sync signal output from IC7001? (pin 47, 48)
No
Yes
Replace the MAIN Assy.
IC7001 and its peripheral circuits are in failure.
Is the sync signal input to IC5802?
No
Yes
Replace the MAIN Assy.
The signal identification path is in failure.
Replace the MAIN Assy.
IC5802 and its peripheral circuits are in failure.
Is a video signal output from IC7001? (pin 10 to 17)(pin 20 to 27) (pin 30 to 37)
No
Yes
Replace the MAIN Assy.
IC6601 and its peripheral circuits are in failure.
Is the selected input signal a HDMI signal?
No
Yes
Are the data displayed on the "HDMI SIGNAL INFO" page of the Factory menu correct?
No
Yes
After changing the source equipment, check the "HDMI SIGNAL INFO" data again.
NG
OK
Replace the MAIN Assy.
Info Frame data have not been acquired.
The source equipment previously used is in failure. No problem with the MAIN Assy.
Does the result of SIG mode detection on the Factory menu coincide with the input signal data?
No
Yes
Is the sync signal output from IC6801? (pin 2, 3)
No
Yes
Replace the MAIN Assy.
IC6801 and its peripheral circuits are in failure.
Is the sync signal input to IC5802?
No
Yes
Replace the MAIN Assy.
The signal identification path is in failure.
Replace the MAIN Assy.
IC5802 and its peripheral circuits are in failure.
Is a video signal output from IC6801? (pin 10 to 13, 16 to 19) (pin 23 to 26, 29 to 32) (pin 33, 36, 37, 40 to 44)
No
Yes
Replace the MAIN Assy.
IC6601 and its peripheral circuits are in failure.
No problem with the MAIN Assy

5.1.6 FLOWCHART OF FAILURE ANALYSIS FOR THE AUDIO SYSTEM

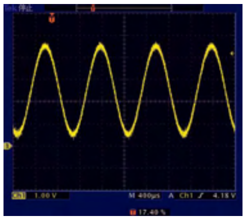
Flowchart of Failure Analysis for The Audio System


Failure analysis for the audio system ⇒ AU1
No sound from the speakers
• Check if sound is muted, the VOL control is set to the minimum value, or if the audio signal is not input.
• Check if the audio cables or speaker cables are broken or loosely connected.
Is the sound from all functions not output?
No
Yes
Is a signal detected at power amp output? (A4 pin 1, 2, 4, 5)
Yes
Replace the SP LR1, 2 Assys or A4-SP1, 2 cable.
No
Is a signal detected at POWER AMP Assy input? (A3 pin 9, 11, 13, 15)
Yes
Is the A_MUTE/A STBY_B signal of the POWER AMP Assy normal ?
No
Replace the cable between A2 and M8 (from MAIN Assy).
No
Yes
NG
Replace the cable between A3 and PR2 (from PRE AUDIO Assy).
Replace the POWER AMP Assy.
Replace the MAIN Assy.
NG
If no sound is output for any of the inputs, and if no signal is input to the Power Amplifier, the PRE AUDIO Assy is definitely in failure.
Is the signal output from IC8201? (pin 34, 33)(Waveforms ⑰, ⑱)
No
IC8201 output is abnormal.
Replace the PRE AUDIO Assy.

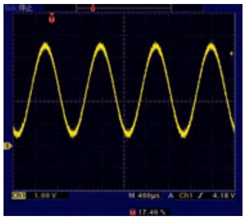

Yes
Is the signal input to IC8201? (pin 28, 29)(Waveforms ⑲, ⑳)
No
IC8207, IC8208, IC8209, and IC8210 is abnormal. (rip sync block)
Check the X8201 (18.43 MHz).
Yes
Is the signal output from IC8201? (pin 36, 35)(Waveforms ㉑, ㉒)
No
IC8201 output is abnormal.
Yes
Is the signal output from IC8203 and IC8204?
No
IC8202, IC8203 and IC8204 is abnormal. (pre audio output block)
Is the sound from INPUT 2, 3 (HDMI) functions not output?
No
Replace the PRE AUDIO Assy.
IC8201 (signal input block) is in failure.
Yes
Do use a DVI → HDMI conversion cable?
Yes
Connect an analog audio.
Perform audio setting with ANALOG or AUTO in the menu.
No
Is the audio setting on the menu correct?
No
Set the audio setting correctly.
Is the audio setting on the menu compatible with the input signal?
Yes
Is the audio signal displayed on the "HDMI SIGNAL INFO2" page of the Factory menu?
No
Check the audio setting of playback machinery.
Yes
Is the signal output from IC8205? (pin 7, 8)(Waveforms ⑮, ⑯)
Yes
Is the signal input to IC8201?
Yes
No
No
Replace the PRE AUDIO Assy.
IC8206 (OP AMP) is in failure.
Is HDMI_MUTE of PR 1 canceled?
No
If the voltage at the PR1 connector is low, sound is not muted.
Yes
Is a signal detected at MCLK/SCK /WS/SDO of PR1?
No
Properly connect the cable between the M9 and PR1 connectors.
Yes
NG
Replace the PRE AUDIO Assy.
I2S DAC is in failure.
Replace the MAIN Assy.
Failure in the line between the IC6801 (HDMI Rx) and M9 connector on the MAIN Assy.

● Waveforms

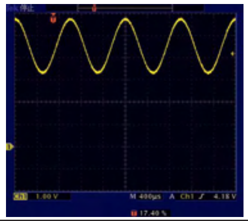
⑮ **IC8205 - pin 7**
V: 1 V/div H: 400 µsec/div



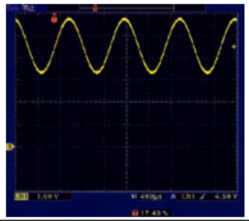
⑯ **IC8205 - pin 8**
V: 1 V/div H: 400 µsec/div



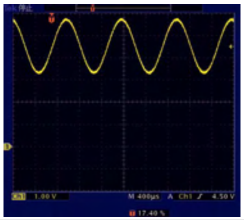
⑰ **IC8201 - pin 34**
V: 1 V/div H: 400 µsec/div



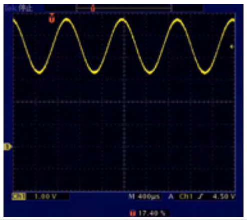
⑱ **IC8201 - pin 33**
V: 1 V/div H: 400 µsec/div



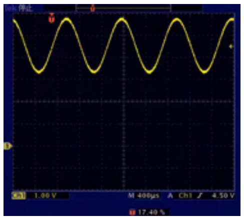
⑲ **IC8201 - pin 29**
V: 1 V/div H: 400 µsec/div



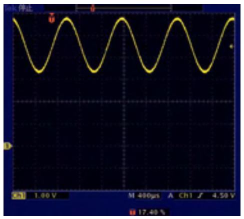
⑳ **IC8201 - pin 28**
V: 1 V/div H: 400 µsec/div



㉑ **IC8201 - pin 36**
V: 1 V/div H: 400 µsec/div



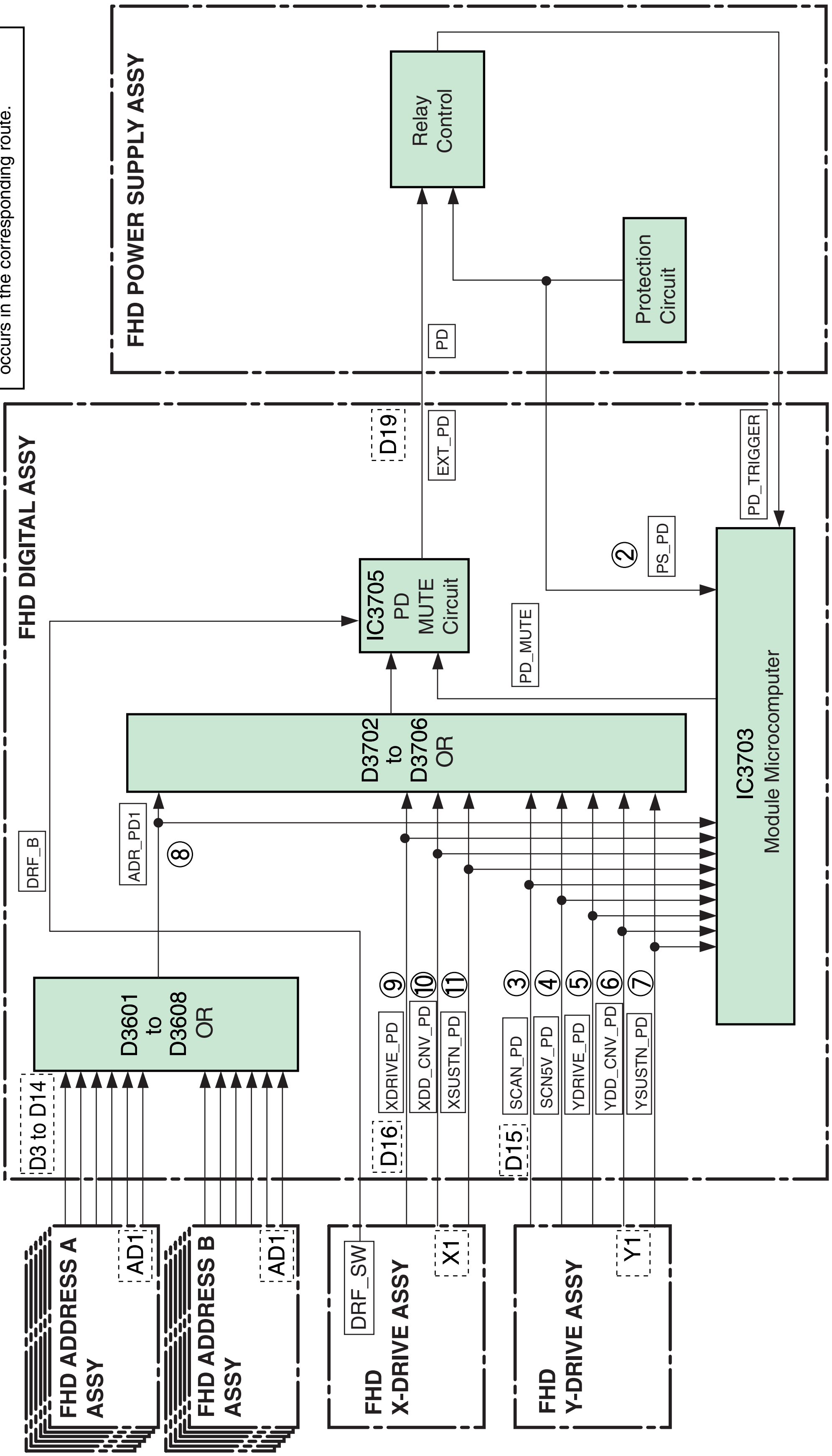
㉒ **IC8201 - pin 35**
V: 1 V/div H: 400 µsec/div



5.2 POWER DOWN

5.2.1 BLOCK DIAGRAM OF THE POWER-DOWN SIGANAL

■ Block diagram of the power-down siganal


FHD POWER SUPPLY ASSY
Relay Control
Protection Circuit
PD
FHD DIGITAL ASSY
D19
EXT_PD
PD_TRIGGER
②
PS_PD
IC3705 PD MUTE Circuit
PD_MUTE
IC3703 Module Microcomputer
D3702 to D3706 OR
DRF_B
ADR_PD1
⑧
D3601 to D3608 OR
D3 to D14
⑨
⑩
⑪
XDRIVE_PD
XDD_CNV_PD
XSUSTN_PD
D16
③
④
⑤
⑥
⑦
SCAN_PD
SCN5V_PD
YDRIVE_PD
YDD_CNV_PD
YSUSTN_PD
D15
FHD ADDRESS A ASSY
AD1
FHD ADDRESS B ASSY
AD1
DRF_SW
FHD X-DRIVE ASSY
X1
FHD Y-DRIVE ASSY
Y1

Note:
The figures ② to ⑪ indicate the number of times the LED flashes when power-down occurs in the corresponding route.

5.2.2 POWER DOWN OF FAILURE ANALYSIS

PD (Power-down) diagnosis

■ Prediction of failure symptoms when a PD (power-down) is generated

LED Flashing Count	PD Circuit	Checkpoint	Main Cause
2	Power supply PD	POWER SUPPLY Unit	Failure in the POWER SUPPLY Unit
		X, Y DRIVE Assy	MSK_MOD is damaged (short-circuiting between VS and GND)
		Each Assy	16.5V/ 12V/ 6.5V/ 5.1V short-circuit within one of PCB.
3	SCAN PD	SCAN Assy	SCAN IC is damaged (short-circuiting between VH and GNDH)
		Y DRIVE Assy	Connectors disconnected between the POWER SUPPLY Unit and the Y DRIVE Assy
			Connectors disconnected between the DIGITAL and the Y DRIVE Assys
			Failure in the VH power
4	IC5V PD	SCAN Assy	SCAN IC is damaged (short-circuiting between IC5V and GNDH)
			Disconnection of the scan-bridge (15-pin) connector
		Y DRIVE Assy	Failure in the photo coupler
			Abnormality in the IC5V DC/DC converter
5	Y-DRIVE PD	Y DRIVE Assy	Abnormality in the 16.5 V power
6	Y DCDC PD	Y DRIVE Assy	MSK_MOD is damaged (short-circuiting of the mask switch)
			Abnormality in the VOFS DC/DC converter
			Abnormality in the VPRST DC/DC converter
			Abnormality in VC_15V DC/DC converter
7	Y SUS PD	Y DRIVE Assy	Abnormality in the DK module
			Abnormality in the control signal line
8	Address PD	ADDRESS Assy	Short-circuiting of Vadr
			TCP damaged
9	X-DRIVE PD	X DRIVE Assy	Connectors disconnected between the DIGITAL and the X DRIVE Assys
			Abnormality in the 16.5 V power
10	X DCDC PD	X DRIVE Assy	Abnormality in VC_15V power
			Abnormality in VXNRST power
11	X SUS PD	X DRIVE Assy	Abnormality in the DK module
			Abnormality in the control signal line
			Connectors disconnected between the POWER SUPPLY Unit and the X DRIVE Assy

• List of detection of disconnected connectors

Assy Name	Connector	Connection Assy	Number of LED flashes	Screen Display
X DRIVE	CN1001	FHD DIGITAL Assy	11 (X DRIVE)	
	CN1204	POWER SUPPLY Unit (ADR system)	–	White screen
	CN1206	POWER SUPPLY Unit (drive system)	12 (X-SUS)	
	CN1201, CN1202, CN1203, CN1205	ADDRESS Assy	8 (ADR)	
Y DRIVE	CN2001	FHD DIGITAL Assy	3 (SCAN)	
	CN2351	POWER SUPPLY Unit (drive system)	3 (SCAN)	
	CN2353	POWER SUPPLY Unit (ADR system)	–	White screen
	CN2354, CN2355, CN2356, CN2357	ADDRESS Assy	8 (ADR)	
	CN2401, CN2402	SCAN Assy	4 (SCN-5V)	
SCAN	CN2701, CN2801	Y DRIVE Assy	4 (SCN-5V)	
ADDRESS	CN1502, CN1702	FHD DIGITAL Assy	8 (ADRS)	
	CN1501, CN1701	X/Y DRIVE Assy	8 (ADRS)	

5.2.3 HOW TO IDENTIFY THE CAUSE OF A POWER-DOWN THAT IS INDICATED BY TWICE FLASHING OF THE RED LED

■ How to identify the cause of a power-down that is indicated by twice flashing of the red LED

A power-down caused by the power supply and one caused by a damaged drive part are both indicated by twice flashing of the LED. The cause of a power-down that is indicated by twice flashing of the red LED can be identified by performing the steps 1 and 2 below:
① Tester check with the power off
② Checks with the power on

① Tester check with the power off

- Tester check between Vsus and SUSGND
  Disconnect all cables from the X and Y DRIVE Assys and check if there is short-circuiting between Vsus and SUSGND in the X and Y DRIVE Assys.

- How to check if there is short-circuiting on the X DRIVE Assy:
  Check between VSUS and SUSGND on the MSK_MOD with the tester. If they are short-circuited, the MSK_Mod (SUS-B/G) is damaged.
  Check between the SUSOUT and PSUS connectors on the MSK_MOD with the tester. If they are short-circuited, the MSK_Mod (MSK) is damaged.
  Check other elements to see if they are short-circuited.

- How to check if there is short-circuiting on the Y DRIVE Assy:
  Check between VSUS and SUSGND in the MSK_MOD with the tester. If they are short-circuited, the MSK_Mod (SUS-B/G) is damaged.
  Check between the SUSOUT and MSK-S connectors on the MSK_MOD with the tester. If they are short-circuited, the MSK_Mod (MSK-R) is damaged.
  Check other elements to see if they are short-circuited.

- Check for short-circuiting in the power supply.

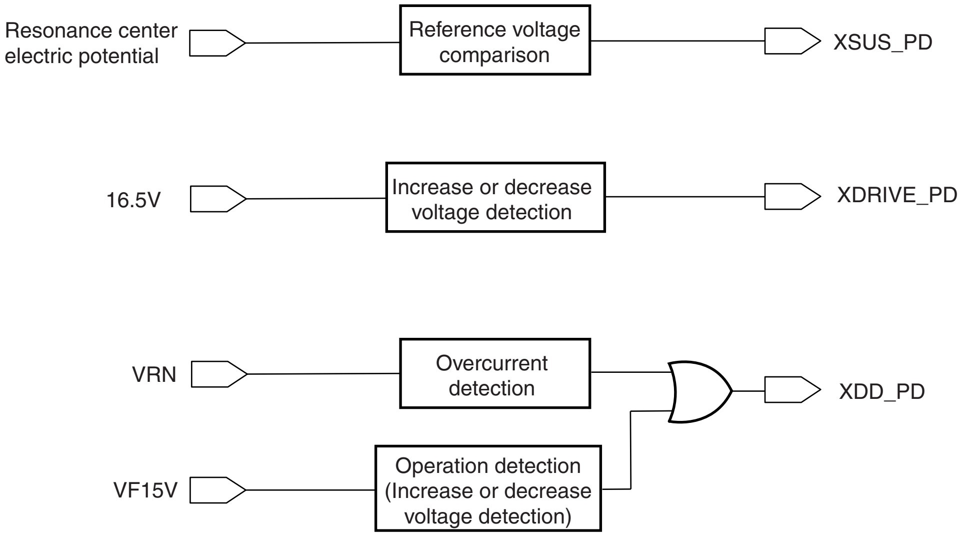
Note that at the beginning of measuring with a tester, charging of an electrolytic capacitor may cause a phenomenon like short-circuiting. However, the resistance will soon rise if there is no short-circuiting.

② Check immediately after the unit is turned on before a power-down occurs.
If the Vsus voltage does not increase, the power supply is in failure.

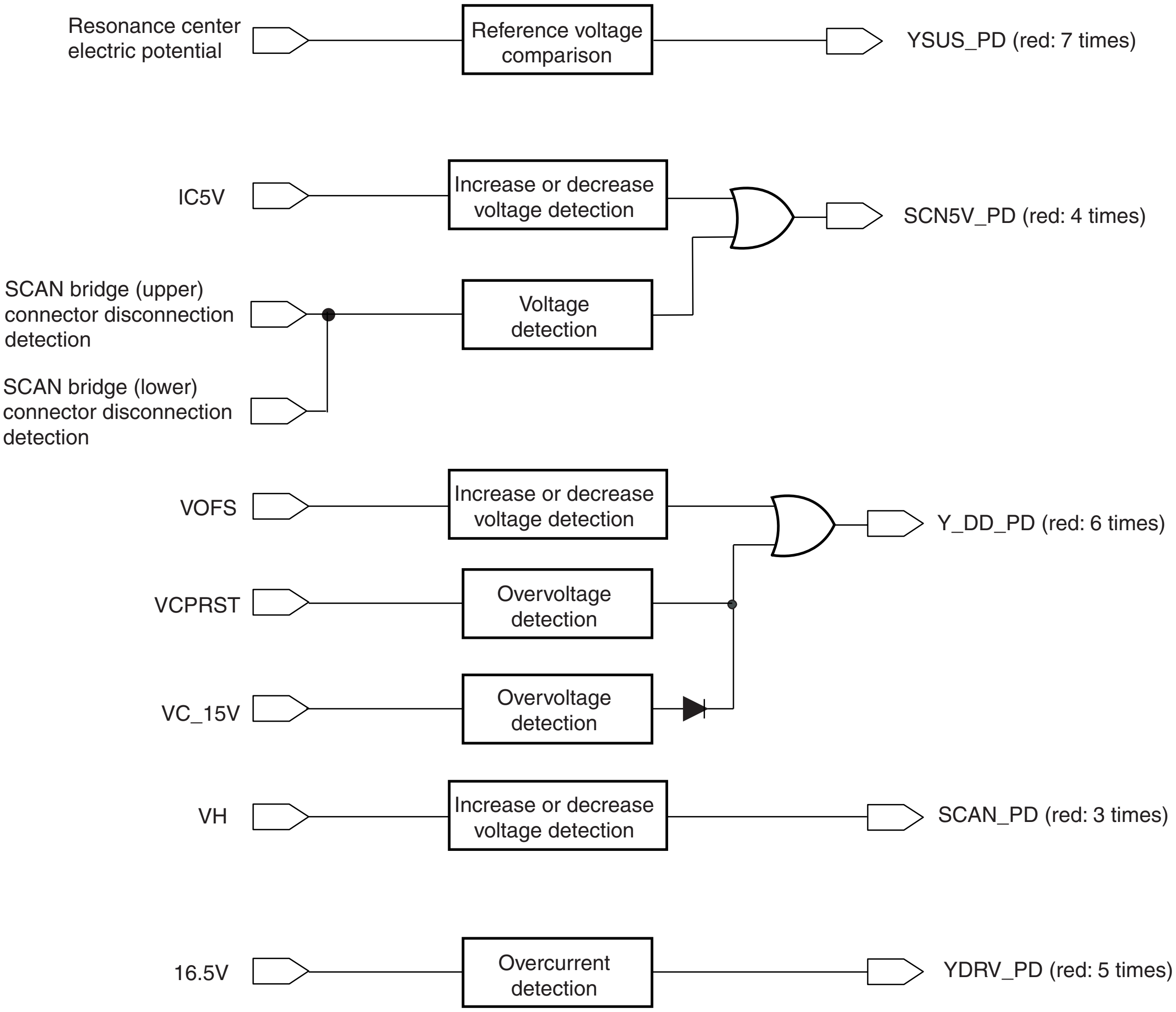
③ Check the PD detection circuit.
If no problem is detected in Steps ① and ②, a power-down occurs even though the voltage is normal.
Therefore, the PD detection circuit may be in failure.

By following the above procedures, the real cause of a power-down can be judged.

X Drive PD system (FHD)

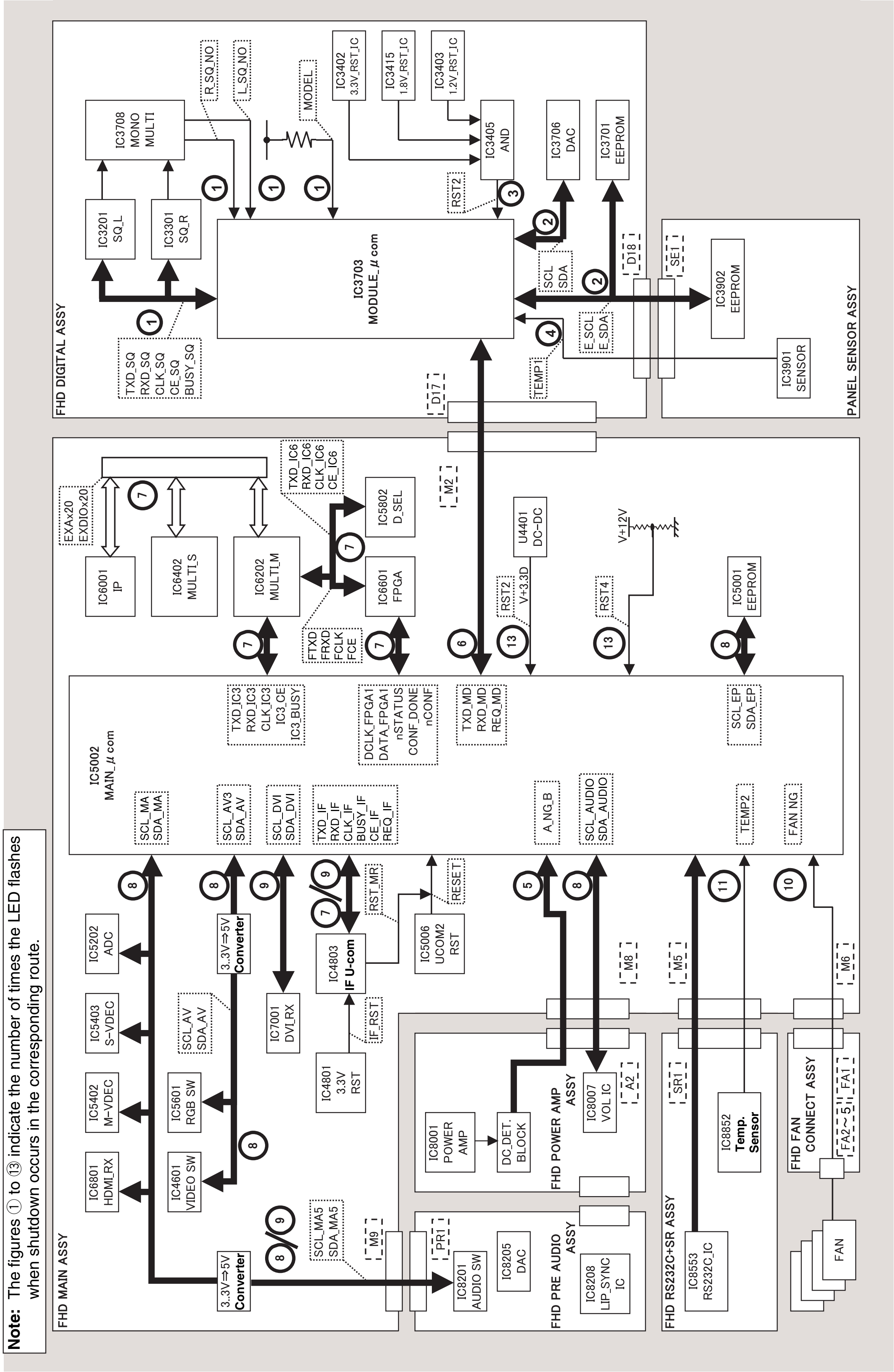

Resonance center electric potential
Reference voltage comparison
XSUS_PD
16.5V
Increase or decrease voltage detection
XDRIVE_PD
VRN
Overcurrent detection
XDD_PD
VF15V
Operation detection (Increase or decrease voltage detection)

Y Drive PD system (FHD)


Resonance center electric potential
Reference voltage comparison
YSUS_PD (red: 7 times)
IC5V
Increase or decrease voltage detection
SCN5V_PD (red: 4 times)
SCAN bridge (upper) connector disconnection detection
Voltage detection
SCAN bridge (lower) connector disconnection detection
VOFS
Increase or decrease voltage detection
Y_DD_PD (red: 6 times)
VCPRST
Overvoltage detection
VC_15V
Overvoltage detection
VH
Increase or decrease voltage detection
SCAN_PD (red: 3 times)
16.5V
Overcurrent detection
YDRV_PD (red: 5 times)

5.3 SHUT DOWN

5.3.1 SHUT DOWN SIGNAL BLOCK DIAGRAM



Shut Down Signal Block Diagram

Note: The figures ① to ⑬ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.

FHD DIGITAL ASSY
IC3708 MONO MULTI
IC3201 SQ_L
IC3301 SQ_R
R_SQ_NO
L_SQ_NO
MODEL
IC3402 3.3V_RST_IC
IC3415 1.8V_RST_IC
IC3403 1.2V_RST_IC
IC3405 AND
IC3706 DAC
IC3701 EEPROM
RST2
IC3703 MODULE_μ com
SCL SDA
E_SCL E_SDA
TEMP1
TXD_SQ RXD_SQ CLK_SQ CE_SQ BUSY_SQ
D18
D17
SE1
IC3902 EEPROM
IC3901 SENSOR
PANEL SENSOR ASSY
M2
EXAx20 EXDIOx20
IC6001 IP
IC6402 MULTI_S
IC6202 MULTI_M
TXD_IC6 RXD_IC6 CLK_IC6 CE_IC6
IC5802 D_SEL
IC6601 FPGA
FTXD FRXD FCLK FCE
U4401 DC-DC
RST2 V+3.3D
V+12V
RST4
IC5001 EEPROM
IC5002 MAIN_μ com
TXD_IC3 RXD_IC3 CLK_IC3 IC3_CE IC3_BUSY
DCLK_FPGA1 DATA_FPGA1 nSTATUS CONF_DONE nCONF
TXD_MD RXD_MD REQ_MD
SCL_EP SDA_EP
SCL_MA SDA_MA
SCL_AV3 SDA_AV
SCL_DVI SDA_DVI
TXD_IF RXD_IF CLK_IF BUSY_IF CE_IF REQ_IF
A_NG_B
SCL_AUDIO SDA_AUDIO
TEMP2
FAN NG
RST_MR
RESET
IC5202 ADC
IC5403 S-VDEC
IC5402 M-VDEC
IC6801 HDMI_RX
3.3V⇒5V Converter
SCL_AV SDA_AV
IC5601 RGB SW
IC4601 VIDEO SW
IC7001 DVI_RX
IC4803 IF U-com
IF_RST
IC4801 3.3V RST
IC5006 UCOM2 RST
M8
M5
M6
SCL_MA5 SDA_MA5
M9
PR1
3.3V⇒5V Converter
FHD MAIN ASSY
IC8001 POWER AMP
DC_DET. BLOCK
IC8007 VOL IC
A2
FHD POWER AMP ASSY
IC8201 AUDIO SW
IC8205 DAC
IC8208 LIP_SYNC IC
FHD PRE AUDIO ASSY
SR1
IC8852 Temp. Sensor
IC8553 RS232C_IC
FHD RS232C+SR ASSY
FA1
FA2~5
FHD FAN CONNECT ASSY
FAN
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑬
⑦/⑨
⑧/⑨

5.3.2 SHUT DOWN OF FAILURE ANALYSIS

■ SD (SHUTDOWN) DIAGNOSIS (1/2)

Frequency of LED Flashing	Major Type	Detailed Type	Log Indication in Factory Mode		Checkpoint	Possible Defective Part	Remarks
			MAIN	SUB			
Blue 1	Abnormality in the Sequence Processors	Communication error with the left and right Sequence Processors	SQ-IC	RTRY	CLK_SQ/TXD_SQ, etc.	IC3201, IC3301, IC3703	The communication between IC and the left and right Sequence Processors is not established. (It is likely that IC3703 [sender] is in failure, because communication is not established, neither that for the left nor right Sequence Processor.)
		Drive stop with the left and right Sequence Processors		SQNO	Check if the video sync signal is input to IC3101.	CN3001, CN3002, IC3001, IC3002, IC3101	If signal detection by the module microcomputer is properly performed, the unit operates on an external sync. (Or both sides of the right part of the screen, whose sync is not monitored, may be abnormal.)
		Busy		BUSY	BUSY_SQ	IC3201, IC3301, IC3703	If BUSY_SQ remains high, a shutdown is generated.
		Communication error with the left Sequence Processor		RTRY/L	RXD_AL	IC3201, IC3409, IC3703	"RXD_AL" has not been transmitted to the module microcomputer ("RXD_AR" has been transmitted). It is likely that IC3201 is not normally started.
		Drive stop with the left Sequence Processor		SQNO/L	Check if the video sync signal is input to IC3201.	CN3001, CN3002, IC3002, IC3101, IC3201, IC3409	A shutdown is generated if IC3201 is not normally started (communication error with IC3409 [flash memory]). (Or both sides of the right part of the screen, whose sync is not monitored, may be abnormal.)
		Incoherent version (hardware, software)		VER-HS	Check the model number of the Digital Assy and the destination of the sequence processors.	IC3101, IC3301	The written SQ_PROG is incoherent with data on the DIGITAL Assy.
		Incoherent version (software, with the left and right Sequence Processors)		VER-LR	Check the versions of the left and right sequence programs.	–	Different sequence programs are written on the left and right Sequence Processors.
		Communication error with the right Sequence Processor		RTRY/R	RXD_AR	IC3301, IC3410, IC3703	"RXD_AR" has not been transmitted to the module microcomputer ("RXD_AL" has been transmitted). It is likely that IC3301 is not normally started.
		Drive stop with the right Sequence Processor		SQNO/R	Check if the video sync signal is input to IC3302.	CN3001, CN3002, IC3002, IC3101, IC3301, IC3410	A shutdown is generated if IC3301 is not normally started (communication error with IC3410 [flash memory]). (Or both sides of the right part of the screen, whose sync is not monitored, may be abnormal.)
Blue 2	Failure in IIC communication with the module microcomputer	DIGITAL Assy EEPROM	MD-IIC	EEPROM	IIC communication line of IC3701	IC3701, IC3703	Check the pull-up resistor of the IIC control line and the power to the corresponding IC.
		PANEL SENSOR Assy EEPROM		BACKUP	IIC communication line of IC3902	IC3902, IC3703	
		DAC		DAC	IIC communication line of IC3706	IC3706, IC3703	
Blue 3	Abnormality in RST2 power decrease	–	RST2	–	Is the output voltage of the DC-DC converter low?	AXY1138	If RST2 does not become high after the unit is turned on, a shutdown will be generated in several seconds.
					The 12 V power is not output.	POWER SUPPLY Unit	Check if V + 12 V is started.
Blue 4	High temperature of the panel	–	TMP_NG	TEMP1	Ambient temperature	–	If TEMP1 that is read by the module microcomputer is 75°C or higher, a shutdown will be generated.
					Abnormality in the panel temperature sensor	IC3901	Check the connection with the PANEL SENSOR Assy.
Blue 5	Short-circuiting of the speakers	–	AUDIO	–	Speaker terminals	CN8402, CN8502	Check if any speaker cable is in contact with the chassis.
					AUDIO_AMP	IC8001, IC5002	Check if the AMP output is short-circuited.
					Periphery of the cable between A2 and M8	CN8002, CN4008	Check if cables are firmly connected.
Blue 6	Failure in communication with the module microcomputer	–	MODULE	–	Communication line between MAIN and MOD	IC3703, IC5002	Check the communication lines (TXD_MOD/RXD_MOD/REQ_MOD).
					Periphery of the cable between D11 and M2	CN3703, CN4207	Check if cables are firmly connected.
Blue 7	Failure in main microcomputer 3-wire serial communication	IF microcomputer	MA_SRL	IF	Communication line between IF and MAIN	IC4803, IC5002	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF).
		MULTI		MULTI	Communication line between MULTI_M and MAIN	IC6202, IC5002	Check the communication lines (TXD_IC3/RXD_IC3/CLK_IC3/CE_IC3/IC3_BUSY).
				I/P	Bus communication line between IP and MULTI_M	IC6001, IC6402, IC6202	Check the communication lines (EXA/EXDIO).
				D_SEL	Communication line between D_SEL and MULTI_M	IC5802, IC6202	Check the communication lines (TXD_IC6/RXD_IC6/CLK_IC6/CE_IC6).
				SLAVE	Bus communication line between MULTI_S and MULTI_M	IC6001, IC6402, IC6202	Check the communication lines (EXA/EXDIO).
		FPGA		FPGA2	Communication line between FPGA and MULTI_M	IC6602, IC6202	Check the communication lines (FTXD/FRXD/FCLK/FCE).
				FPGA1	Config. communication line between FPGA and MAIN	IC6601, IC5002	Check the communication lines (DCLK_FPGA1/DATA_FPGA1/nSTATUS/CONF_DONF_DONE/nCONF).

SD (SHUTDOWN) DIAGNOSIS (2/2)

Frequency of LED Flashing	Major Type	Detailed Type	Log Indication in Factory Mode		Checkpoint	Possible Defective Part	Remarks
			MAIN	SUB			
Blue 8	Failure in IIC communication with the main microcomputer	AV switch	MA-IIC	AV-SW	IIC communication line between AV_SW and MAIN	IC4601, IC5002	Check the communication lines (SCL_AV3/SDA_AV3 or SCL_AV/SDA_AV).
		RGB switch		RGB-SW	IIC communication line between RGB_SW and MAIN	IC5601, IC5002	Check the communication lines (SCL_AV3/SDA_AV3 or SCL_AV/SDA_AV).
		Main VDEC		M-VDEC	IIC communication line between M_VDEC and MAIN	IC5401, IC5002	Check the communication lines (SCL_MA/SDA_MA).
		Sub VDEC		S-VDEC	IIC communication line between S_VDEC and MAIN	IC5403, IC5002	Check the communication lines (SCL_MA/SDA_MA).
		AD/PLL		ADC	IIC communication line between ADC and MAIN	IC5202, IC5002	Check the communication lines (SCL_MA/SDA_MA).
		HDMI		HDMI	IIC communication line between HDMI_RX and MAIN	IC6801, IC5002	Check the communication lines (SCL_MA/SDA_MA).
		64k EEPROM		MA-EEP	IIC communication line between EEPROM and MAIN	IC5001, IC5002	Check the communication lines (SCL_EP/SDA_EP).
		VOLUME IC		AUDIO	IIC communication line between VOL_IC and MAIN	IC8007, IC5002	Check the communication lines (SCL_AUDIO/SDA_AUDIO).
		VOLUME IC			Periphery of the cable between A2 and M8	CN8002, CN4008	Check if cables are firmly connected.
		AUDIO SW		–	Periphery of the cable between PR1 and M9	CN8201, CN6801	Check the communication lines (SCL_MA/SDA_MA or SCL_MA5/SDA_MA5).
Blue 9	Failure in communication with the main microcomputer and unknown	–	MAIN	–	Communication line between IF and MAIN	IC4803, IC5002, IC5005	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF).
		DVI receiver	MA-IIC	DVI	IIC communication line between DVI_RX and MAIN	IC7001, IC5002	Check the communication lines (SCL_DVI/SDA_DVI).
		AUDIO SW		AUD_SW	IIC communication line between AUDIO_SW and MAIN	IC8201, IC5002	Check the communication lines (SCL_MA/SDA_MA or SCL_MA5/SDA_MA5).
					Periphery of the cable between PR1 and M9	CN8201, CN6801	Check if cables are firmly connected.
Blue 10	FAN NG	–	FAN	–	Dirt attached to the fan motor	–	Check the fan motor
					Periphery of the FAN CONNECT Assy	FAN CONNECT Assy	FAN_NG
					Periphery of the cable between FA1 and M6 or FA2 and M5	CN8651 to CN8655, CN4003	Check if cables are firmly connected.
					Periphery of the fan control regulator	IC5003, IC5008	–
Blue 11	High temperature of the unit	–	TEMP2	–	Temperature sensor or its periphery	–	A shutdown is generated if TEMP2 becomes higher than 59°C
					Periphery of the temperature sensor	IC8852	TEMP2
					Periphery of the cable between SR1 and M5	CN8851, CN4009	Check if cables are firmly connected.
Blue 13	Failure in the POWER SUPPLY Unit	DC-DC converter power decrease	MA-PWR	M-DCDC	DC-DC converter or its periphery, RST2	U4401	Check if V + 3.3 V is started.
		POWER SUPPLY		RELAY	The 12 V power is not output, RST4	–	Check if V + 12 V is started.
					Periphery of the cable between P8 and M1	CN4006	Check if cables are firmly connected.

5.4 INFOMATION WHICH IS NOT FAILURE

1. Function of lowering the luminance level (Information on symptoms that are not failure)

■ High-temperature protection function 1

If the temperature reaches 70 °C, the limit of the maximum count of plasma discharge is gradually lowered, in order to prevent overheating.

- Temperature control is performed based on the temperature value of TEMP1.
- The maximum count of plasma discharge is decreased by 8 every 5 seconds.
- The lowest limit of the maximum count of plasma discharge is about 700.
- The maximum count of plasma discharge will increase gradually once the temperature of the unit is lowered to a specified temperature.

■ High-temperature protection function 2 (Only for the FHD panel)

Because the heat value with the PDP-500EX panel during lighting of cells is somewhat greater than with other models, the count of plasma discharge with regard to the input APL is lowered if the temperature of the unit reaches 45°C. In actuality, the ABL adjustment value is offset.

- Temperature control is performed based on the temperature of TEMP1.
- The ABL adjustment value is decreased by one step every 30 seconds.
- The ABL adjustment value will increase gradually once the temperature of the unit is lowered to a specified temperature.

■ Panel Protection Function 1 (for preventing burn-in during Still Picture mode)

If Still Picture mode is continued for 3 minutes or more, the limit of the maximum count of plasma discharge is gradually lowered, in order to reduce burn-in on the display.

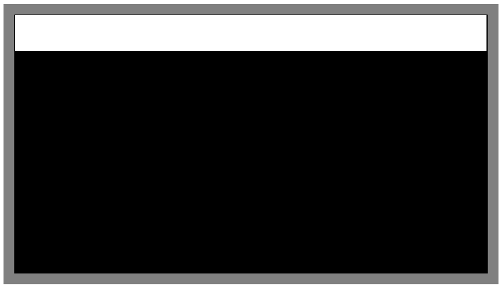
- Whether the image displayed is a still picture or not is detected, and the Panel Protection Function will be activated (Even if the mouse pointer is moved on a still picture, that picture is judged as a still picture.)
- The maximum count of plasma discharge is decreased by 8 every 5 seconds.
- The lowest limit of the maximum count of plasma discharge is about 700. (It takes about 15 minutes to reach the lowest limit, although it depends on what is displayed on the screen.)
- If the image is changed to an animated picture, the maximum count of plasma discharge is gradually increased.

Note: How to lower the luminance level is the same as that for the high-temperature protection function 1.

■ Panel Protection Function 2 (for protecting the SCAN IC)

If a particular load is added on the SCAN IC locally, as shown in the figure on the right, the limit of the maximum count of plasma discharge is gradually lowered.

Note: How to lower the luminance level is the same as that for the high-temperature protection function 1.

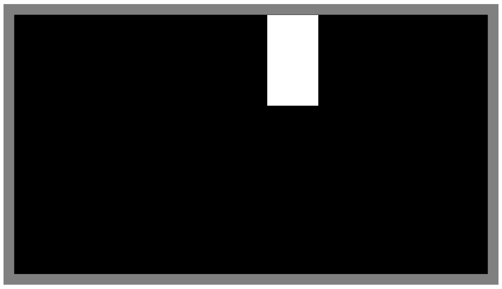


Example: A display with which the SCAN IC protection function is to be activated

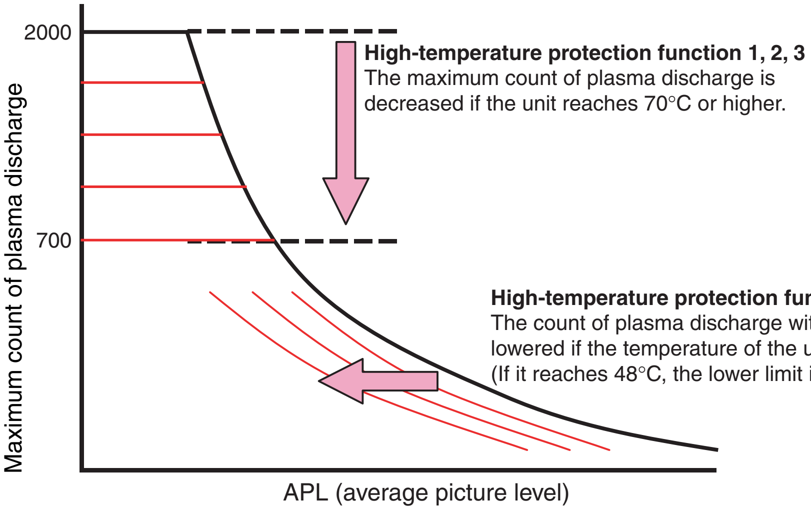
■ Panel Protection Function 3 (for protecting the panel from cracking)

The heating value for a bright window part on the screen, as shown in the figure on the right, is high. So, if such a pattern is recognized, the limit of the maximum count of plasma discharge is gradually lowered.

Note: How to lower the luminance level is the same as that for the high-temperature protection function 1.



Example: A display with which the panel-cracking protection function is to be activated



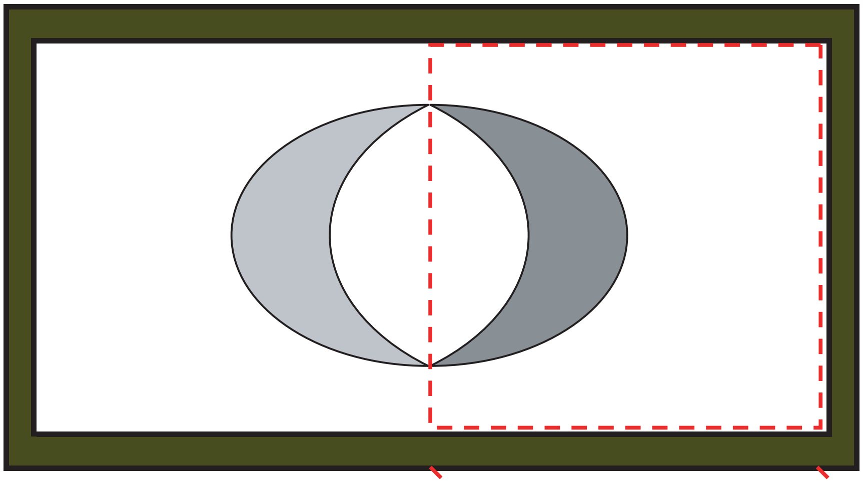
High-temperature protection function 1, 2, 3
The maximum count of plasma discharge is decreased if the unit reaches 70°C or higher.

High-temperature protection function 2
The count of plasma discharge with regard to the input APL is lowered if the temperature of the unit reaches 45°C or higher. (If it reaches 48°C, the lower limit is further decreased.)

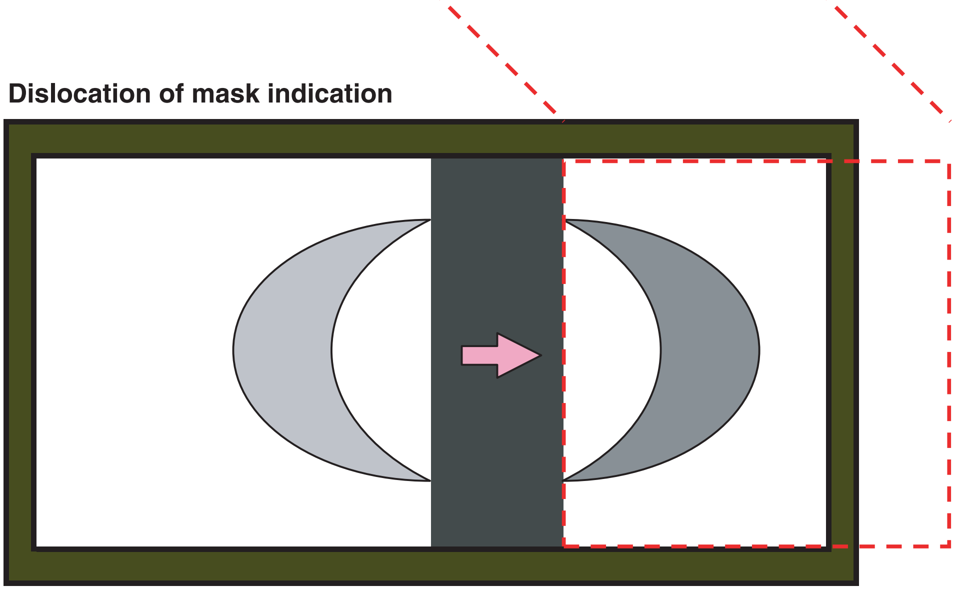
2. On dislocation of the mask indication, which is generated on the right side of the screen

With the application-specific integrated circuit (ASIC) designed for the FHD panel, the mask indication may be dislocated. When the unit is turned on with the panel mask indication ON, the mask indication is dislocated on approximately one unit out of three hundred. As end users basically do not use panel mask indications, this is not a problem in normal usage. Dislocation may be generated during failure analysis or when turning the unit off then back on during voltage margin adjustment.

Normal mask indication



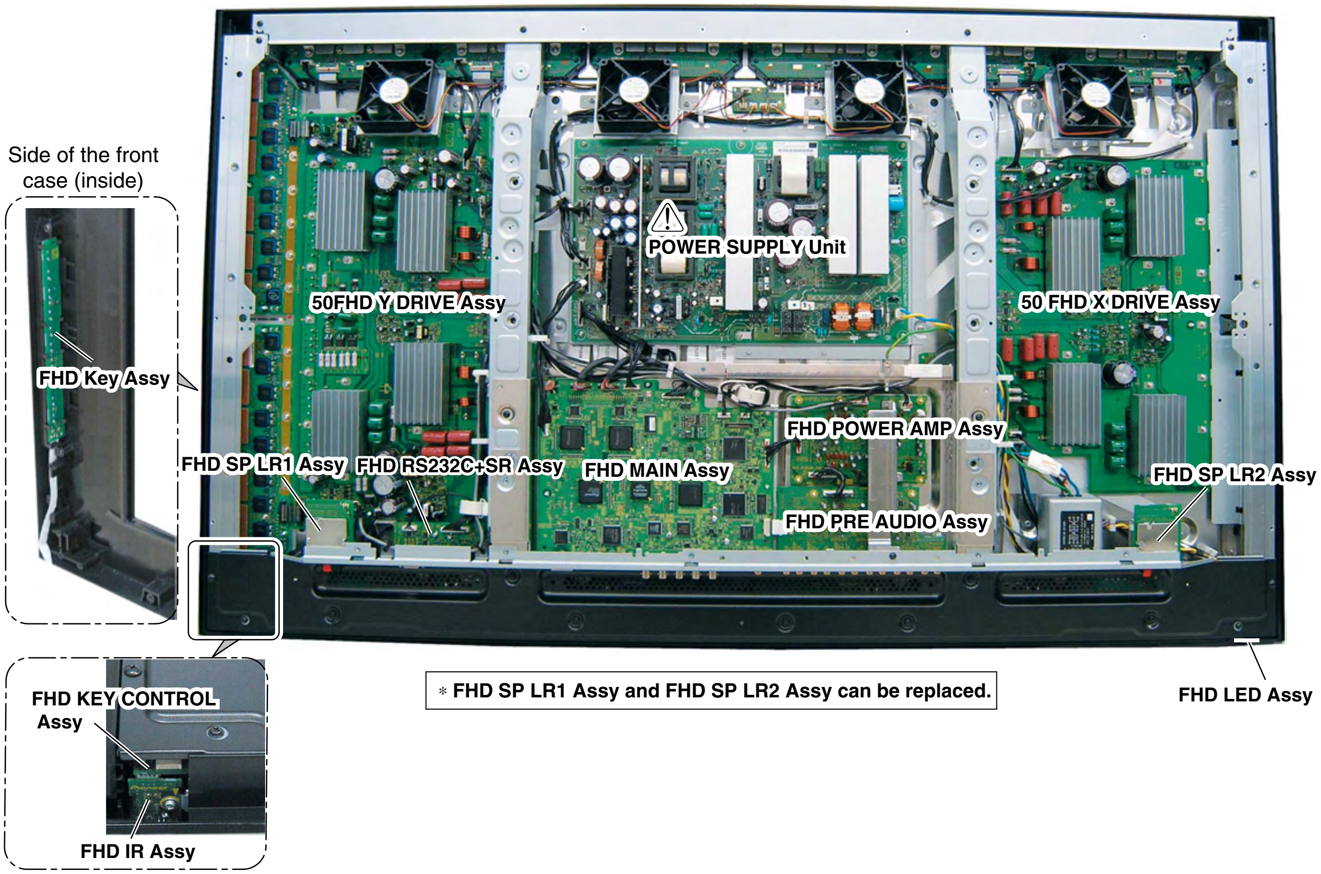
Dislocation of mask indication



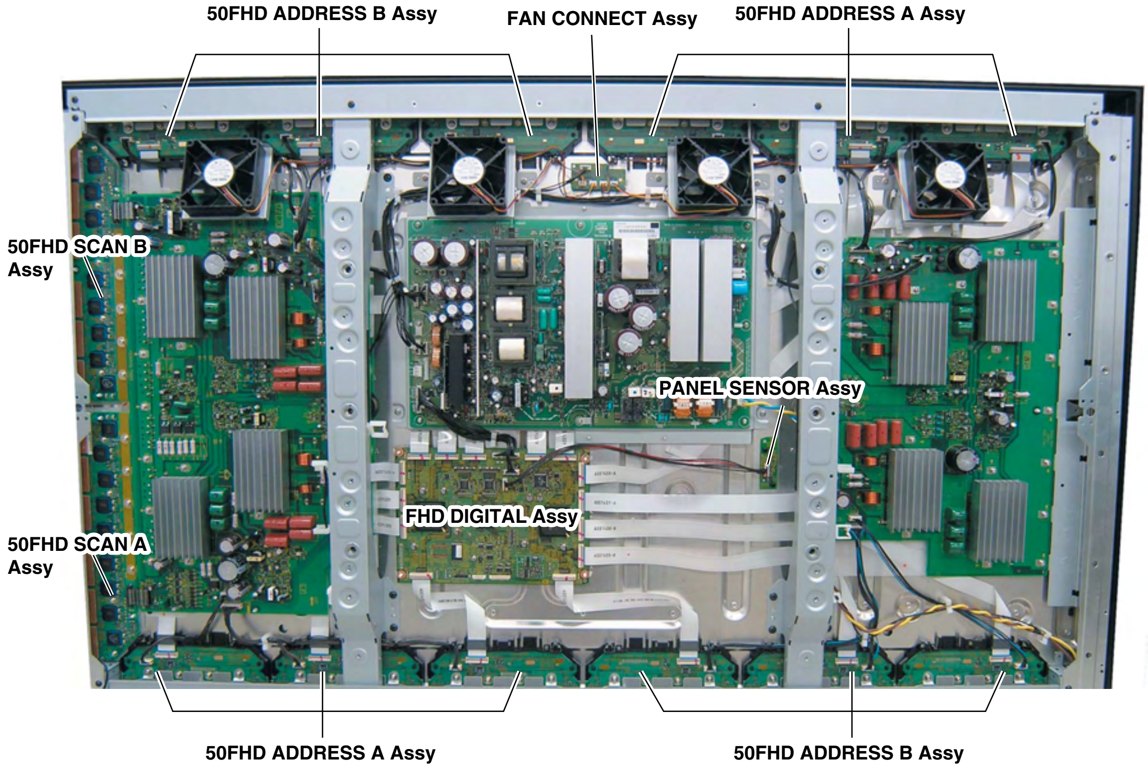
Note: The mask indication pattern indicated above is not a real pattern.

6. DISASSEMBLY

6.1 PCB LOCATION


Side of the front case (inside)
FHD Key Assy
POWER SUPPLY Unit
50FHD Y DRIVE Assy
50 FHD X DRIVE Assy
FHD POWER AMP Assy
FHD SP LR1 Assy
FHD RS232C+SR Assy
FHD MAIN Assy
FHD SP LR2 Assy
FHD PRE AUDIO Assy
FHD LED Assy
FHD KEY CONTROL Assy
FHD IR Assy

∗ FHD SP LR1 Assy and FHD SP LR2 Assy can be replaced.

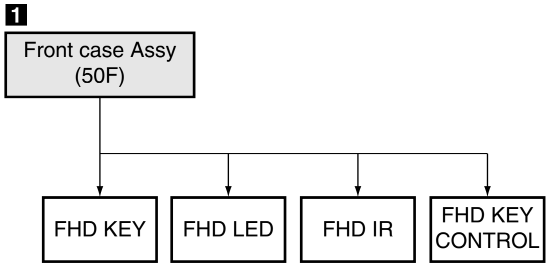

50FHD ADDRESS B Assy
FAN CONNECT Assy
50FHD ADDRESS A Assy
50FHD SCAN B Assy
PANEL SENSOR Assy
FHD DIGITAL Assy
50FHD SCAN A Assy
50FHD ADDRESS A Assy
50FHD ADDRESS B Assy

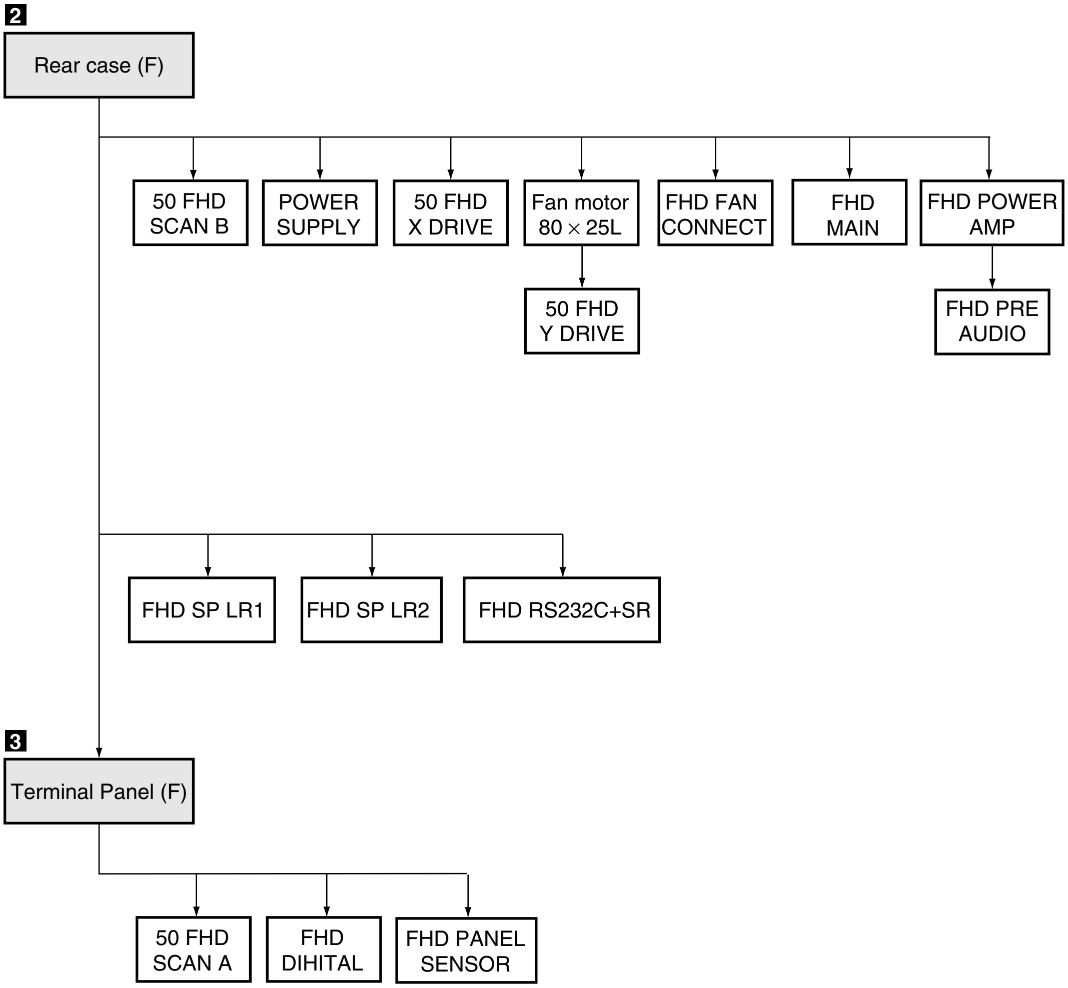
6.2 FLOWCHART OF THE MAIN PARTS AND PC BOARDS EXCHANGE

Note : Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Flowchart of the main parts and PC Boards removal

It is effective when removing the main parts and PC Boards by the following step.

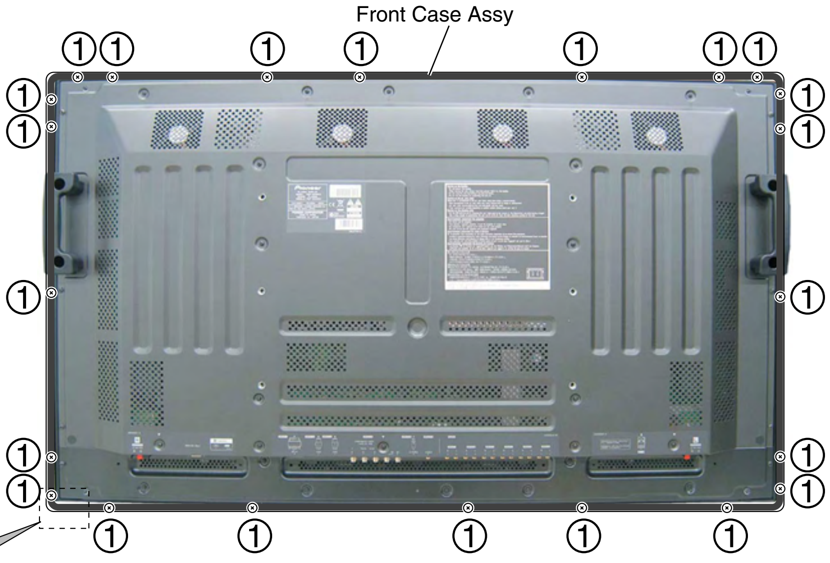

1
Front case Assy (50F)
FHD KEY
FHD LED
FHD IR
FHD KEY CONTROL

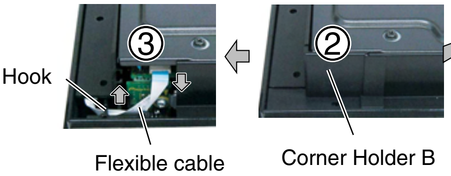

2
Rear case (F)
50 FHD SCAN B
POWER SUPPLY
50 FHD X DRIVE
Fan motor 80 × 25L
FHD FAN CONNECT
FHD MAIN
FHD POWER AMP
50 FHD Y DRIVE
FHD PRE AUDIO
FHD SP LR1
FHD SP LR2
FHD RS232C+SR
3
Terminal Panel (F)
50 FHD SCAN A
FHD DIHITAL
FHD PANEL SENSOR

Disassembly (1)

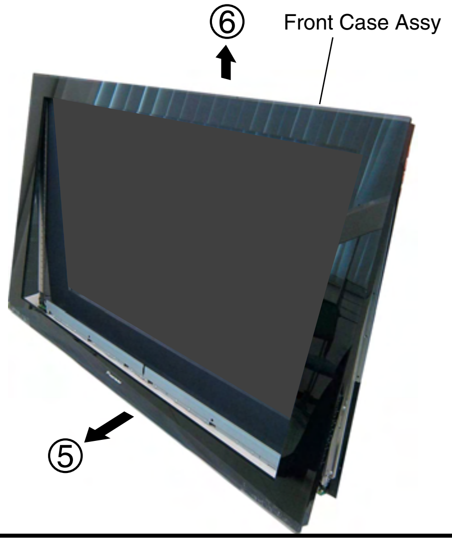
1 Front Case Assy

① Remove the 22 screws. (APZ30P100FTB)
② Remove the corner Holder B.
③ Disconnect the flexible cable.
④ Remove the front case assy.


Front Case Assy
① ① ① ① ① ① ①
① ①
① ①
① ①
① ①
① ①
① ①
① ① ① ① ①

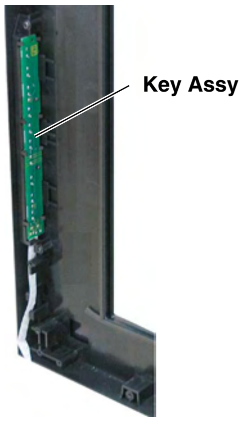

③
②
Hook
Flexible cable
Corner Holder B

⑤ ⑥ Remove the front case assy.


⑥
Front Case Assy
⑤

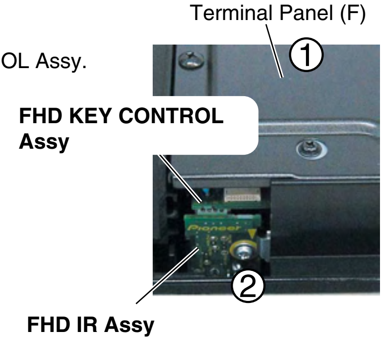
1 -1 FHD Key Assy, FHD IR Assy, FHD KEY CONTROL Assy

- FHD **Key Assy**



- FHD **IR Assy, FHD KEY CONTROL Assy**

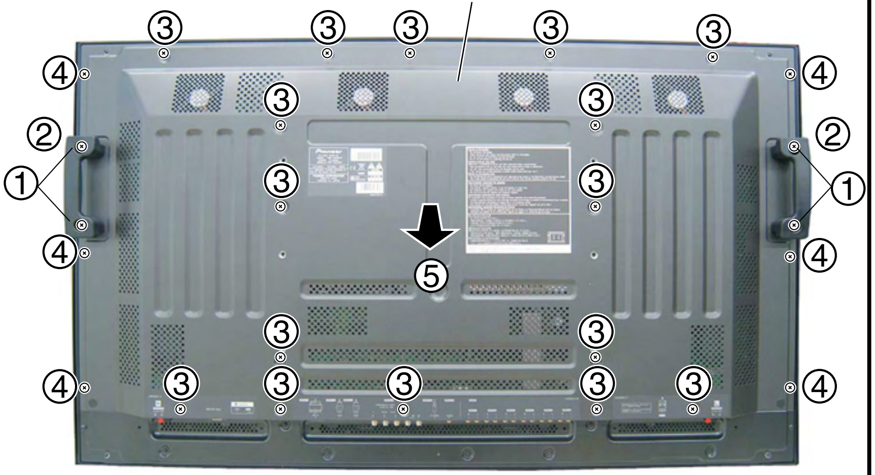
① Remove the Terminal Panel (F). (refer to "Terminal Panel")
② Remove the one screw
③ Remove the IR Assy, KEY CONTROL Assy.


Terminal Panel (F)
①
FHD KEY CONTROL Assy
②
FHD IR Assy

Disassembly (2)

2 Rear Case (F)

① Remove the four screws. (HMB50P140FTB)
② Remove the 2 grips.
③ Remove the 16 screws.(AMZ30P060FTB)
④ Remove the six screws.(TBZ40P080FTB)
⑤ Remove the rear case (F).

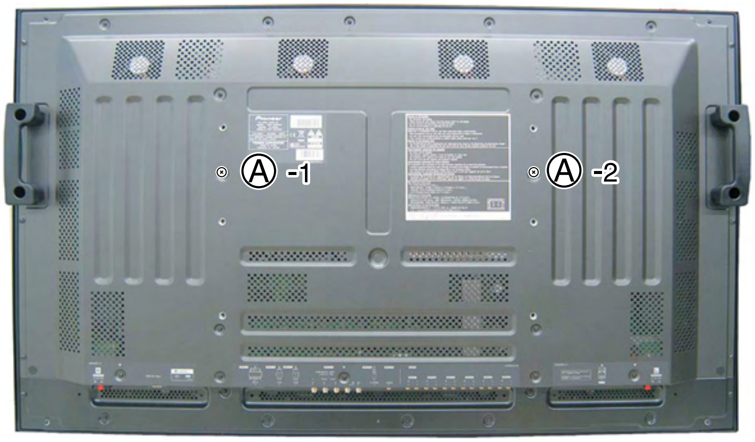


● About reattachment

For easy reattachment, be sure to install the screws for the Rear case in the order indicated in the photo. After securing those screws in place, the other screws

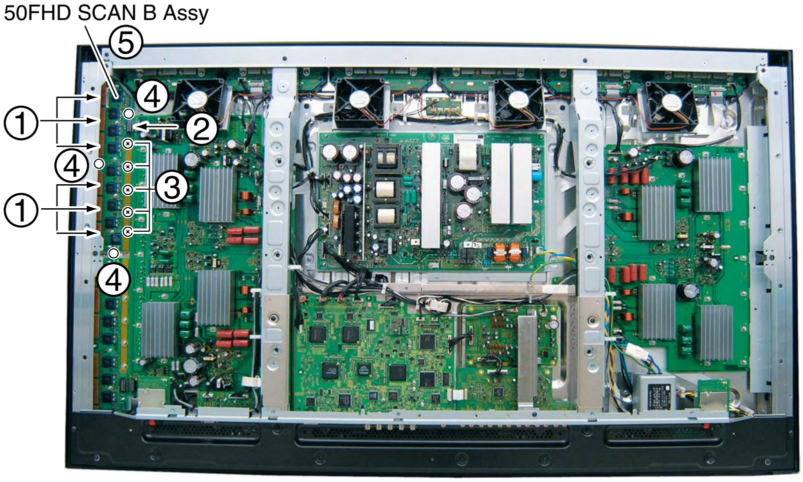
Ⓐ -1 one screw. (AMZ30P060FTB)

Ⓐ -2 one screw. (AMZ30P060FTB)



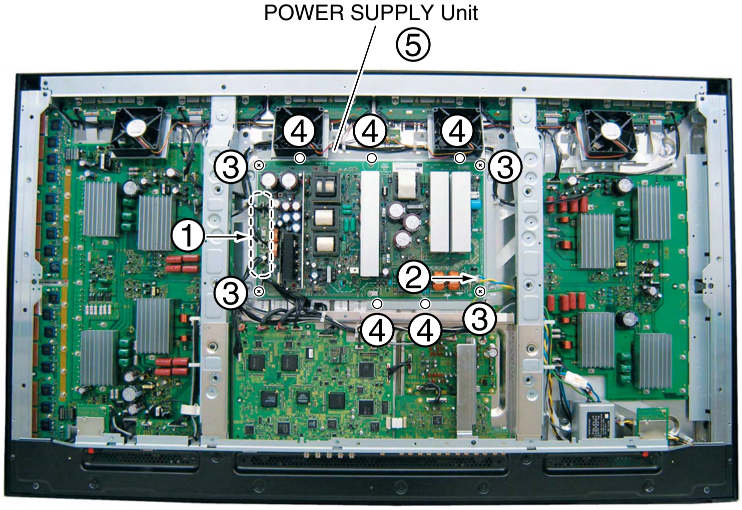
2 -1 50FHD SCAN B

① Disconnect the six connectors.
② Disconnect the one connectors.
③ Remove the five screws.
④ Unhook the three hooks.
⑤ Remove the 50FHD SCAN B Assy.


50FHD SCAN B Assy
⑤
④
①
②
④
③
①
④

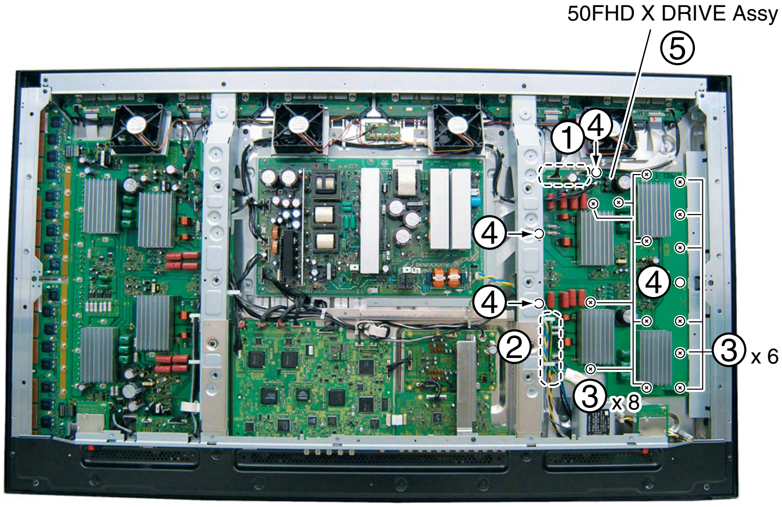
2 -2 POWER SUPPLY Unit

① Disconnect the seven connectors.
② Disconnect the one connectors.
③ Remove the four screws.
④ Unhook the five hooks.
⑤ Remove the POWER SUPPLY Unit.


POWER SUPPLY Unit
⑤
④
④
④
③
③
①
②
③
④
④
③

2 -3 50FHD X DRIVE Assy

① Disconnect the four connectors.
② Disconnect the three connectors.
③ Disconnect the 14 screws.
④ Unhook the five hooks.
⑤ Disconnect the 50FHD X DRIVE ASSY.

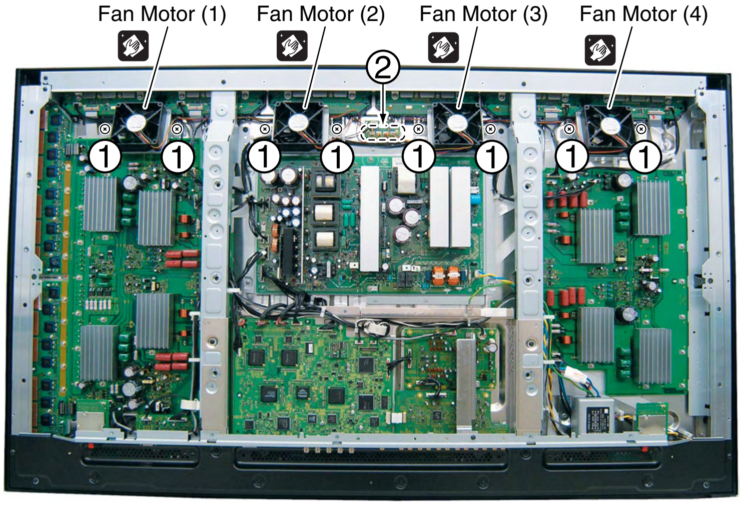

50FHD X DRIVE Assy
⑤
①
④
④
④
④
②
③ x 6
③ x 8

2 -4 Fan Motor

Fan Motor (1) (2) (3) (4)

① Remove the two screws.

② Disconnect the one connector.


Fan Motor (1)
Fan Motor (2)
Fan Motor (3)
Fan Motor (4)
②
① ① ① ① ① ① ① ①

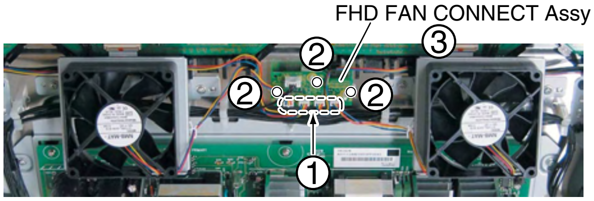
Cleaning liquid: GEM1004
Cleaning paper: GED-008

2 -5 FHD FAN CONNECT Assy

① Disconnect the five connectors.

② Unhook the three hooks.

③ Remove the FHD FAN CONNECT.


FHD FAN CONNECT Assy
②
③
②
②
①

2 -6 50FHD Y DRIVE Assy

① Remove the Fan Motor 1. (refer to " Fan Motor")

② Disconnect the four connectors.

③ Disconnect the two connectors.

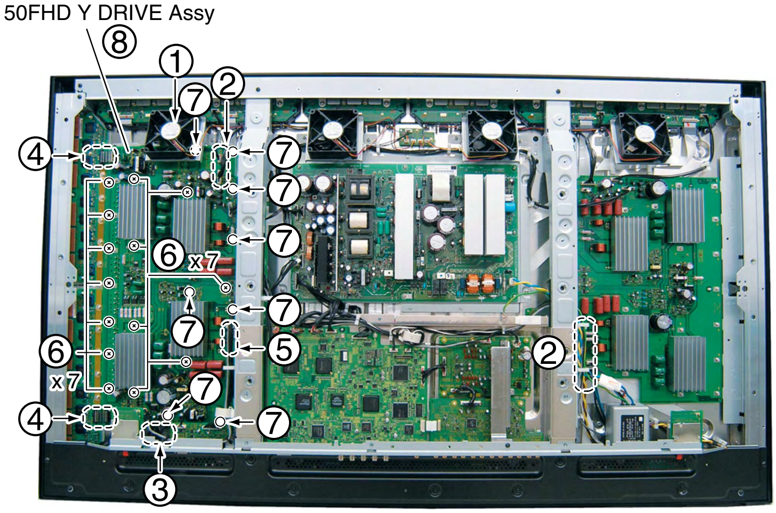
④ Disconnect the two connectors.

⑤ Disconnect the flexible cable.

⑥ Remove the 14 screws.

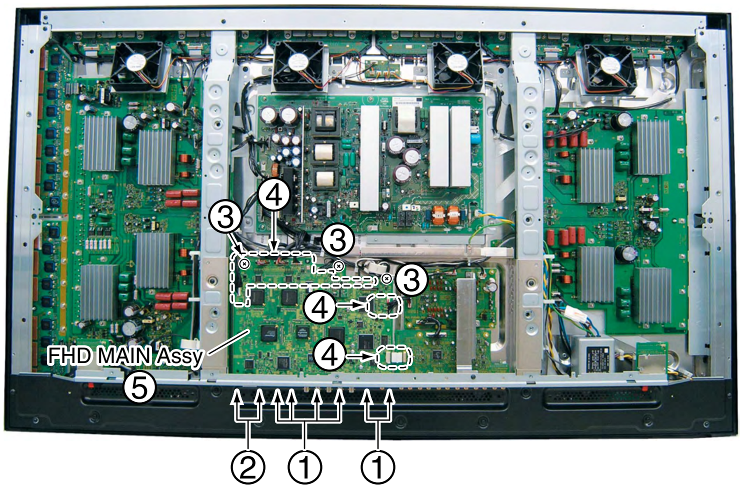
⑦ Unhook the 8 hooks.

⑧ Remove the 50FHD Y DRIVE Assy.


50FHD Y DRIVE Assy
⑧
①
②
⑦
④
⑦
⑦
⑦
⑥ x7
⑦
⑦
⑤
②
⑥
x7
⑦
④
⑦
③

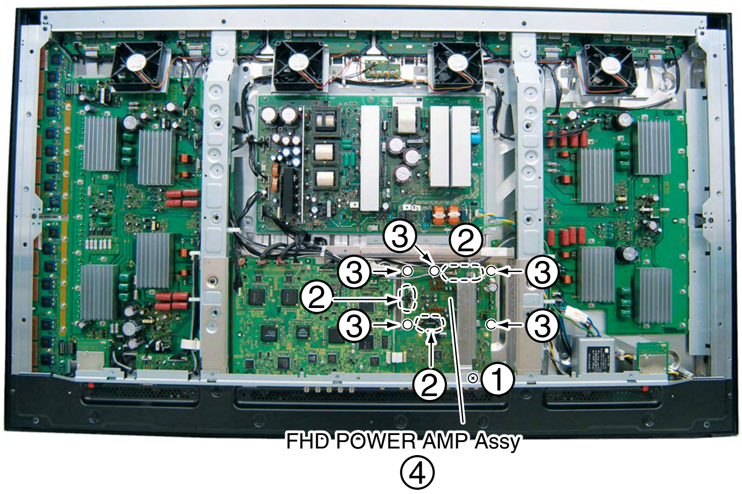
2 -7 FHD MAIN Assy

① Remove the six screws.
② Remove the hix two head screws.
③ Remove the three screws.
④ Disconnect the 9 connectors.
⑤ Remove the FHD MAIN Assy.


④
③
③
③
④
FHD MAIN Assy
④
⑤
②
①
①

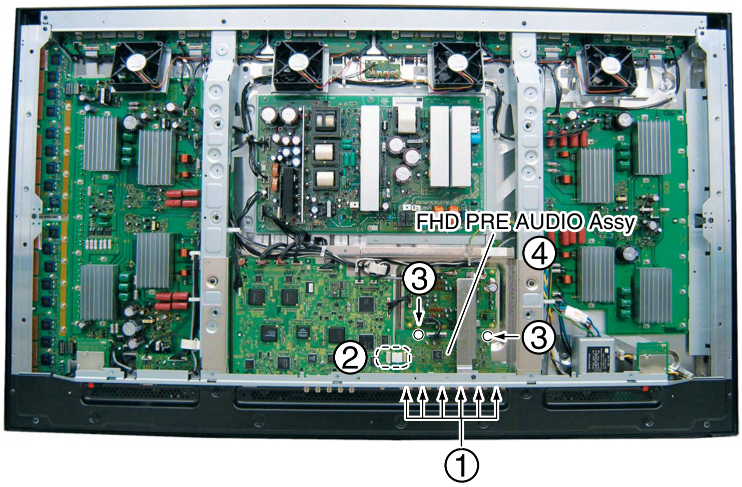
2 -8 FHD POWER AMP Assy

① Remove the one screws.
② Disconnect the four connectors.
③ Unhook the five hooks.
④ Remove the FHD POWER AMP Assy.


③
②
③
③
②
③
③
②
①
FHD POWER AMP Assy
④

2 -9 FHD PRE AUDIO Assy

① Remove the six screws.
② Disconnect the one connector.
③ Unhook the two hooks.
④ Remove the FHD PRE AUDIO Assy.

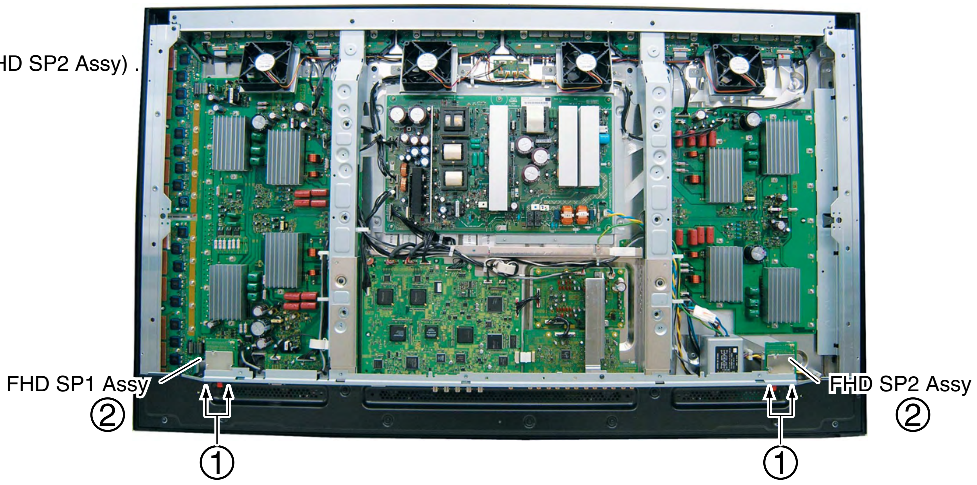

FHD PRE AUDIO Assy
④
③
③
②
①

2 -10 FHD SP1, FHD SP2 Assys

① Remove the two screws.

② Remove the FHD SP1 Assy (FHD SP2 Assy) .

③ Disconnect the one connectors.


FHD SP1 Assy
②
①
FHD SP2 Assy
②
①

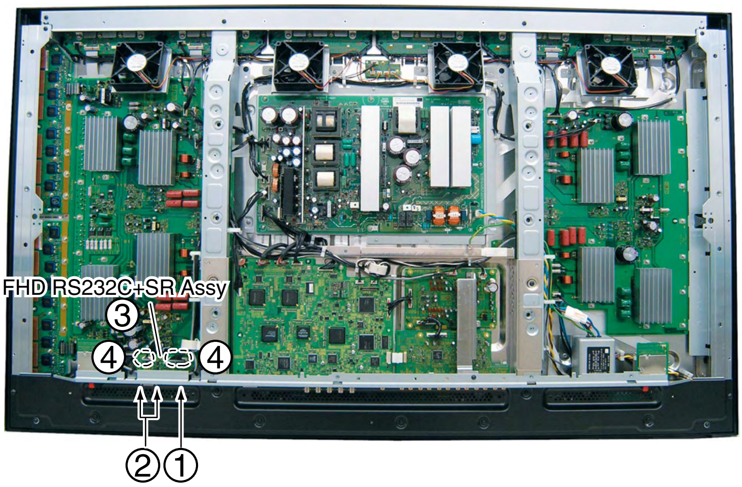
2 -11 FHD RS232C+SR Assy

① Remove the one screws.

② Remove the two hex head screws.

③ Remove the FHD RS232C+SR Assy.

④ Disconnect the two connectors.


FHD RS232C+SR Assy
③
④
④
②①

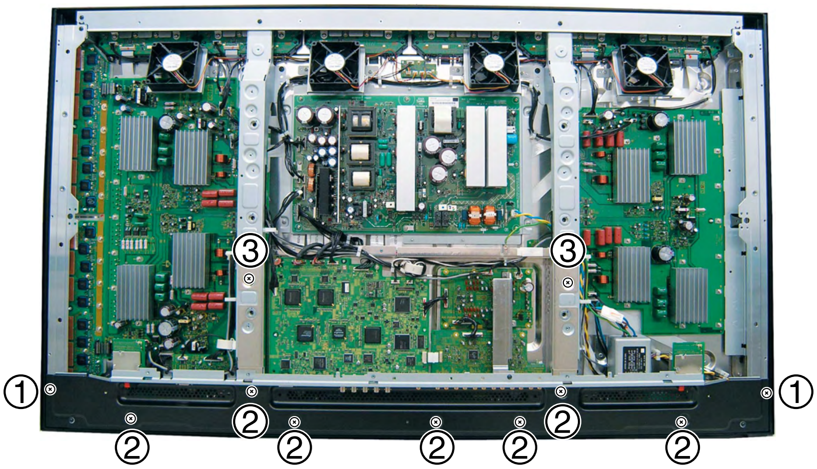
Disassembly (3)

3 Terminal Panel (F)

① Remove the two screws.(TBZ40P080FTB)

② Remove the seven screws.(AMZ30P060FTB)

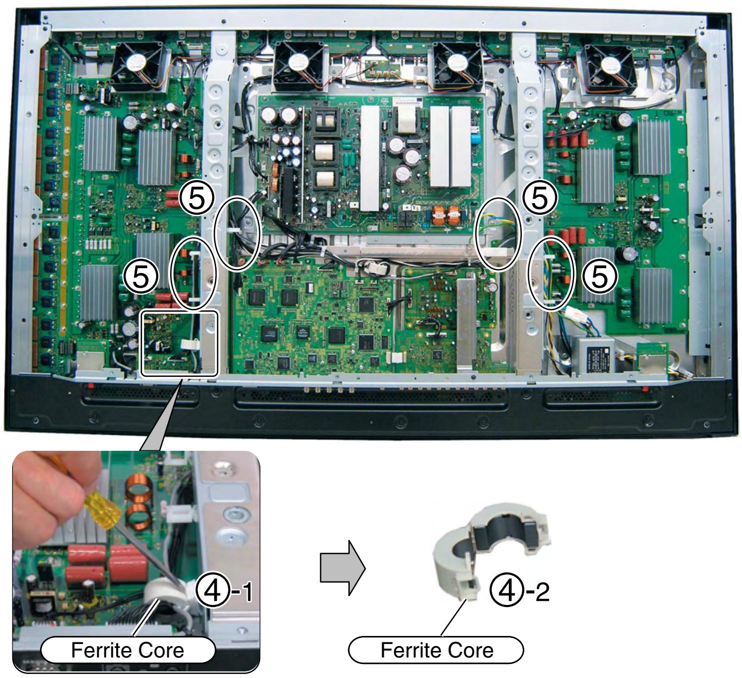
③ Remove the two screws.(AMZ30P060FTB)



③
③
①
①
②
②
②
②
②
②
②

④ Remove the Ferrite Core.

⑤ Remove the cable from the wire saddle.



⑤
⑤
⑤
⑤
④-1
Ferrite Core
④-2
Ferrite Core

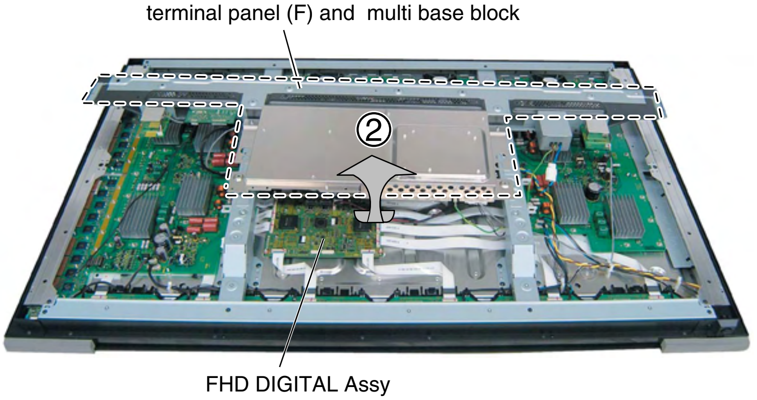
3 -1 FHD DIGITAL Assy

① Remove the terminal panel (F) (refer to " Terminal Panel")

② terminal panel (F) and multi base block is caused.

⬇

Diagnosis of FHD DIGITAL Assy section


terminal panel (F) and multi base block
②
FHD DIGITAL Assy

3 -2 50FHD SCAN B

① Remove the terminal panel (F) (refer to " Terminal Panel")

② Disconnect the six connectors.

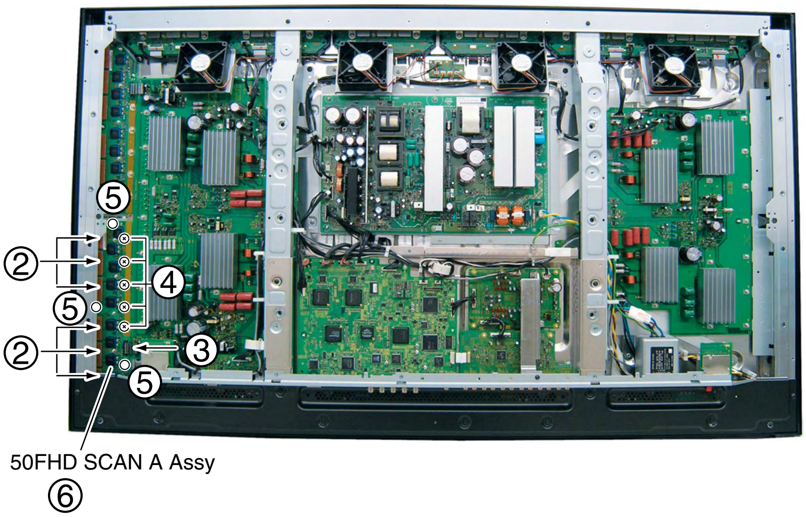
③ Disconnect the one connectors.

④ Remove the five screws.

⑤ Unhook the three hooks.

⑥ Remove the50FHD SCAN A Assy.

Remove the two screws.(AMZ30P060FTB)


⑤
②
④
⑤
②
③
⑤
50FHD SCAN A Assy
⑥

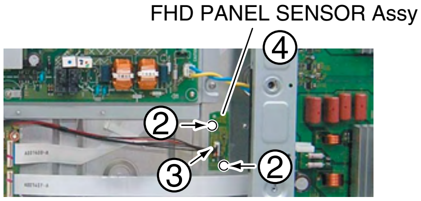
3 -3 FHD PANEL SENSOR Assy

① Remove the terminal panel (F) (refer to " Terminal Panel")

② Remove the two nyron rivet.

③ Disconnect the one connectors.

④ Remove the FHD PANE SENSOR Assy.


FHD PANEL SENSOR Assy
④
②
③
②

7. ADJUSTMENT

7.1 PARTS CHANGE OF NOTES

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

7.2 POSSIBLE CASES WHERE READJUSTMENT IS REQUIRED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	No adjustment required
FHD MAIN Assy	Refer to "8.2.3.5 FINAL SETUP"
FHD DIGITAL Assy	Refer to "7.3 BACKUP OF ADJUSTMENT VALUES FOR THE MAIN UNIT"
50FHD X DRIVE Assy	No adjustment required
50FHD Y DRIVE Assy	No adjustment required
50FHD SCAN A Assy	No adjustment required
50FHD SCAN B Assy	No adjustment required
Service Panel Assy	Refer to "7.4.1 ADJUSTMENTS WHEN THE SERVICE PANEL ASSY IS REPLACED" and "7.6 HOW TO CLEAR VARIOUS LOGS."
Other assemblies	No adjustment required

■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	The assembly must be replaced as a unit, and no part replacement is allowed.
FHD DIGITAL Assy	No adjustment required
50FHD X DRIVE Assy 50FHD Y DRIVE Assy	After any of the parts shown below on the 50FHD X DRIVE or 50FHD Y DRIVE Assy are replaced, a waveform adjustment is required.

Object parts

Assy	Ref. No.	Part Category	Part No.
50FHD X DRIVE Assy	IC1206	Photo Coupler	PS9117-TLB
	IC1207	FET Driver	TND307TD-TBB
	IC1210	FET Driver	TND307TD-TBB
50FHD Y DRIVE Assy	IC2242	Photo Coupler	PS9117-TLB
	IC2241	FET Driver	TND307TD-TBB
	IC2252	FET Driver	TND307TD-TBB

Refer to "7.5 ADJUSTMENTS WHEN THE DRIVE ASSY ARE REPLACED".

Other assemblies	No adjustment required

■ Nonreplaceable parts

FHD DIGITAL Assy

Ref. No.	Part Category	Part No.	Remarks
IC3701	4K EEPROM	BR24L04FJ-W-TBB	Replaceable if backup data are to be copied to the part after replacement

PANEL SENSOR Assy

Ref. No.	Part Category	Part No.	Remarks
IC3902	2K EEPROM	BR24L02FJ-W-TBB	Replaceable if the FHD DIGITAL Assy is not replaced simultaneously

FHD MAIN Assy

Ref. No.	Part Category	Part No.	Remarks
IC4601	CVBS SW IC	R2S11002AFT-K	
IC4803	FLASH UCOM	AGC1005- -PI-K	The program for the microcomputer is written on it.
IC5001	64K EEPROM	BR24L64F-W-TBB	Adjustment data that are specific to the Assy are written on it.
IC5005	FLASH MEMORY IC	AGC1012- -PI-K	The program for the microcomputer is written on it.
IC5202	A/D CONVERTER	AD9985KSTZ-110-K	
IC5402	3D Y/C SEPA & VDEC IC	UPD64015AGM-UEU-K	
IC5403	VIDEO DECODER	TVP5150AM1PBS-K	
IC5601	RGB SW IC	R2S11001FT-K	
IC6203	FLASH MEMORY IC	AGC1013- -PI-K	The program for the microcomputer is written on it.
IC6802	2K EEPROM	BR24L02FJ-W-TBB	EDID data are written on it.
IC6803	2K EEPROM	BR24L02FJ-W-TBB	EDID data are written on it.
IC7003	2K EEPROM	BR24L02FJ-W-TBB	EDID data are written on it.
IC7004	2K EEPROM	BR24L02FJ-W-TBB	EDID data are written on it.

7.3 BACKUP OF ADJUSTMENT VALUES FOR THE MAIN UNIT

■ Outline

Adjustment data are stored in the EEPROM (IC3701/4K) on the FHD DIGITAL Assy in the production process.
Those adjustment data are also automatically stored in the EEPROM (for backup: IC3902/2K) on the PANEL SENSOR Assy.

■ Backed up data

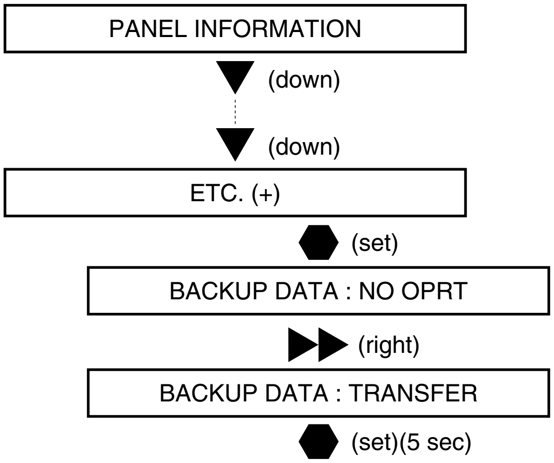
- Voltage margine adjustment value
- Electricity upper limit adjustment value
- Panel white balance adjustment value
- Drive waveform adjustment value
- PD/SD histories
- Hour-meter count
- Pulse-meter count
- Serial No.
- P-ON counter value

7.3.1 HOW TO COPY THE BACKUP DATA (when replacing the Assy with one for service)

When replacing the FHD DIGITAL Assy with one for service, copy the backup data, as shown below:

■ **Command:** BCP command
(Be effective between FAY command)

■ **Factory Menu:**



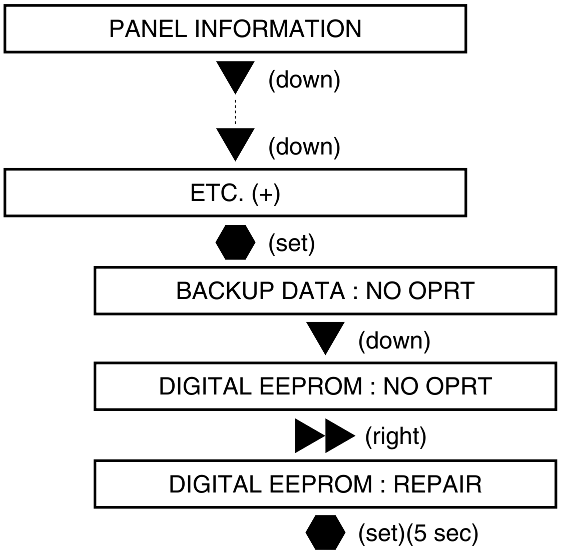
Note:
If copying of the backup data fails in the above procedure, the red LED lights, and the blue LED flashes, as a warning that no backup data were copied.

7.3.2 HOW TO COPY THE BACKUP DATA (when reusing a second-hand Assy)

When replacing the FHD DIGITAL Assy with one that was mounted on another product, copy the backup data, as shown below:

■ **Command:** FAJ command
(Be effective between FAY command)

■ **Factory Menu:**


PANEL INFORMATION
(down)
(down)
ETC. (+)
(set)
BACKUP DATA : NO OPRT
(down)
DIGITAL EEPROM : NO OPRT
(right)
DIGITAL EEPROM : REPAIR
(set)(5 sec)

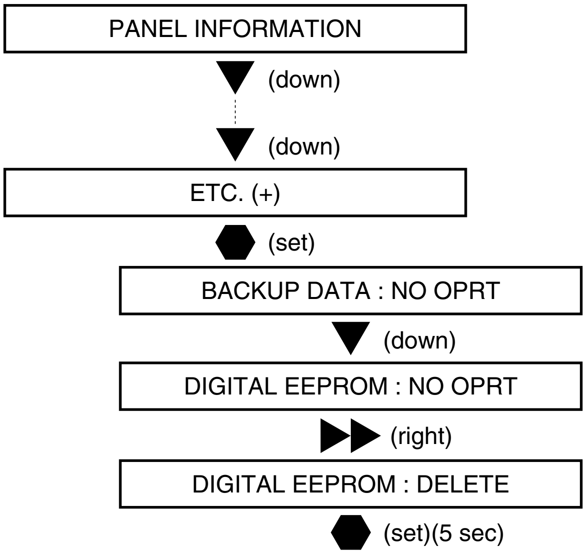
7.3.3 FORMATION OF A FHD DIGITAL ASSY (RE-SERVICE PART)

■ How to adjust the FHD DIGITAL Assy that is mounted on one product so that it can be mounted on another product

When adjusting the FHD DIGITAL Assy that is mounted on one product so that it can be mounted on another product, proceed as follows:

■ **Command:** UAJ command
(Be effective between FAY command)

■ **Factory Menu:**


PANEL INFORMATION
(down)
(down)
ETC. (+)
(set)
BACKUP DATA : NO OPRT
(down)
DIGITAL EEPROM : NO OPRT
(right)
DIGITAL EEPROM : DELETE
(set)(5 sec)

Note:
If the secondhand FHD DIGITAL Assy is mounted in the product then the unit is turned on then back off again, the data in the EEPROM on the FHD DIGITAL Assy are copied over the EEPROM in the PANEL SENSOR Assy.

7.4 EXCHANGE OF SERVICE PANEL ASSY

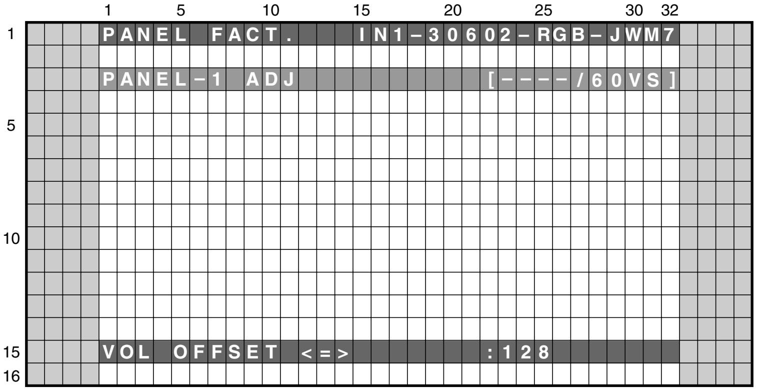
7.4.1 ADJUSTMENTS WHEN THE SERVICE PANEL ASSY IS REPLACED

Flow for panel replacement

Voltage margin adjustment is required after the Panel Assy is replaced with one for service.

[Preparations]

- Basically, the Panel Factory menu is used for the voltage margin adjustment.
- The 60-Hz video sequence is used as the drive sequence.
- While adjusting the voltage margin using the Panel Factory menu, the current drive sequence is indicated on the screen, as shown below. Make sure that 60VS is always indicated during adjustment.



```
PANEL FACT.     IN1-30602-RGB-JWM7

PANEL-1 ADJ           [----/60VS]

VOL OFFSET <=>        :128
```

Example of an OSD during Panel Factory mode

[Supplement]

- When the Raster Mask for margin adjustment is displayed during Panel Factory mode, the Panel White Balance setting value is default, and the Panel Gamma setting is "Straight" in the PANEL-1 ADJ layer. The third line of the OSD during Panel Factory mode is "----/****," where "****" is the type of drive sequence set.

- If you wish to adjust using RS-232C commands, note that the commands are different from those used during Factory mode. The commands for this are indicated below:
  PAV S00: To switch from Panel Drive mode to Panel Factory mode
  VFQ S03: To switch the Drive Sequence to Video 60 H
  WBI S01: To temporarily reset the Panel WB adjustment value to default (To cancel resetting, issue WBI then S00.)
  PGM S00: To switch the Gamma setting to "Factory"

Note: If the power is shut down during the adjustment procedure, issue the above commands again.

OVERVIEW

Operation switch

When the voltage is to be adjusted, do the following:

Enter Factory mode.
Display RST MASK 05 (black).

FAY
MKS S55

Voltage setting

Set VOL SUS and VOL RST P, and set temporary VOL OFFSET, as indicated below:

VOL SUS: 125
VOL RST P: Set voltage as shown at panel label.
VOL OFFSET: Set voltage as shown at panel label.

VSU125
VRP***
VOS

Aging

Aging process for 3 minutes with RST MASK 01 (white)

To prevent an error caused by the temperature characteristics, raise the panel temperature to a certain extent beforehand. But do not perform aging more than 20 minutes.

MKS S51

Vofs actual adjustment (② to ④)

Signals to be measured

VOL OFFSET lower limit:
- VOL OFFSET_min1 "light purple"
- VOL OFFSET_min2 "light blue"
- VOL OFFSET_min3 "violet"

VOL OFFSET upper limit:
- VOL OFFSET_max1 "red 582"
- VOL OFFSET_max2 "green 850"
- VOL OFFSET_max3 "blue 850"

MKS S59
MKS S62
MKS S63
MKS S64
MKS S66
MKS S67

Vofs setting

Set according to the table for Vofs setting values.

VOF***

CA check with black

With RST MASK 05 (black) displayed, check if there are stationary or horizontally moving luminescent spots.

MKS S55

Operation switch

Do the following after the voltage adjustment is completed:

Exit Factory mode.

MKS S00
FAN

CA check

Check that the picture is properly displayed.

Use DVD, LD, and broadcast signals for checking.

Ranges of the adjustable voltages

(Variable voltage ranges when the upper and lower limit of each voltage are to be checked in this flowchart)

Vsus = 205 [V]
Vofs = 15 to 60 [V]
Vyprst = 220 to 271 [V]
Vxnrst = 170 [V]
Vh = 130 [V]
Vadr = 60 [V]

Ranges of the voltage settings

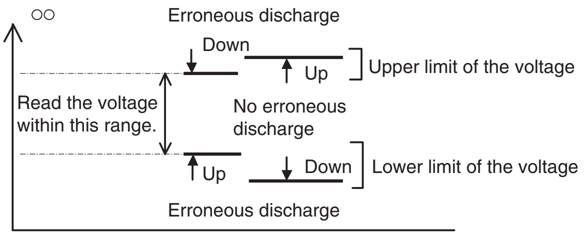
(Ranges of the voltage settings for the unit)

Vsus = 205 [V]
Vofs = 28 to 46 [V]
Vyprst = 220 to 271 [V]
Vxnrst = 170 [V]
Vh = 130 [V]
Vadr = 60 [V]

When calculating the voltage, round off the fractional part.
(For circuit protection, it is desirable to set the voltage to a lower value.)

In the following text, voltage is described in absolute values.

For margin measuring, read the voltage within the hysteresis (stricter value), as shown below:


○○
Erroneous discharge
Down
Up
Upper limit of the voltage
Read the voltage within this range.
No erroneous discharge
Up
Down
Lower limit of the voltage
Erroneous discharge

The Definition of Abnormal Cells

Abnormal bright cells: Within five cells on screen.
(only one cell within a radius of 1 cm)

Abnormal dark cells: Under fifteen cells on screen.
(under two cells within a radius of 1 cm)

Count abnormal cells at a distance of 1 cm from panel.
If abnormal cells won't occur longer than one second, do not count the abnormal cells.
Do not count still dark cells and bright cells.

Shipment standards for the unit:

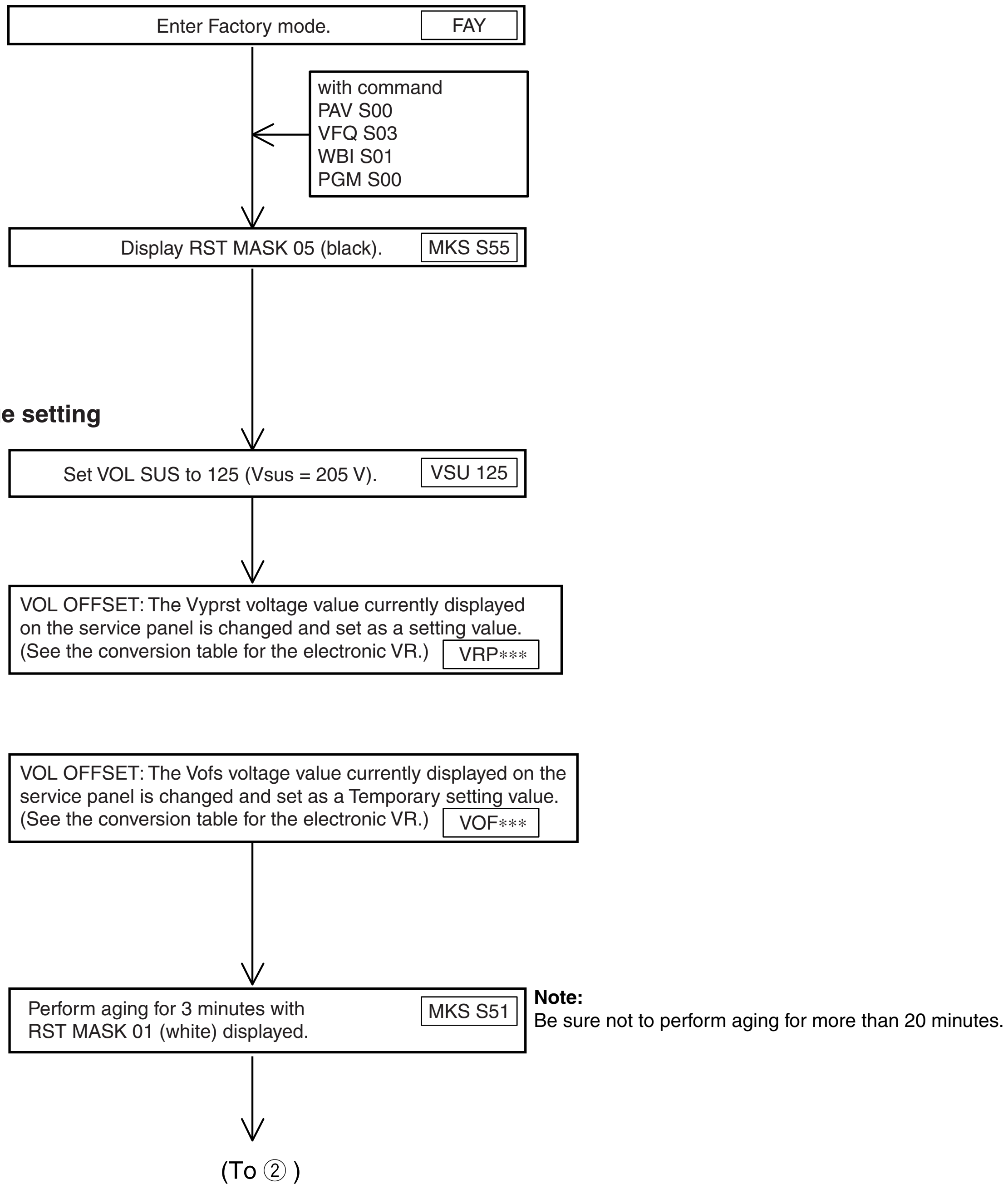
VOL SUS setting = 125/205 V
Vofs setting = 28 to 46 V
Vofs_max-Vofs setting: 10 V or more
Vofs setting-Vofs_min: 9 V or more
Vyprst setting = 220 to 271 V

Definition of tones for the measuring signals

(Digital Raster signal, Video-60 Hz sequence, ABL_ON)

	White	Black	Light purple	Light blue	Violet	Red 582	Green 850	Blue 850
R	1023/1023	0/1023	277/1023	464/1023	1023/1023	582/1023	0/1023	0/1023
G	1023/1023	0/1023	130/1023	1023/1023	464/1023	0/1023	850/1023	0/1023
B	1023/1023	0/1023	277/1023	1023/1023	1023/1023	0/1023	0/1023	850/1023

① Preparations



Initial setting

Enter Factory mode. FAY

with command
PAV S00
VFQ S03
WBI S01
PGM S00

Display RST MASK 05 (black). MKS S55

Voltage setting

Set VOL SUS to 125 (Vsus = 205 V). VSU 125

VOL OFFSET: The Vyprst voltage value currently displayed on the service panel is changed and set as a setting value. (See the conversion table for the electronic VR.) VRP***

VOL OFFSET: The Vofs voltage value currently displayed on the service panel is changed and set as a Temporary setting value. (See the conversion table for the electronic VR.) VOF***

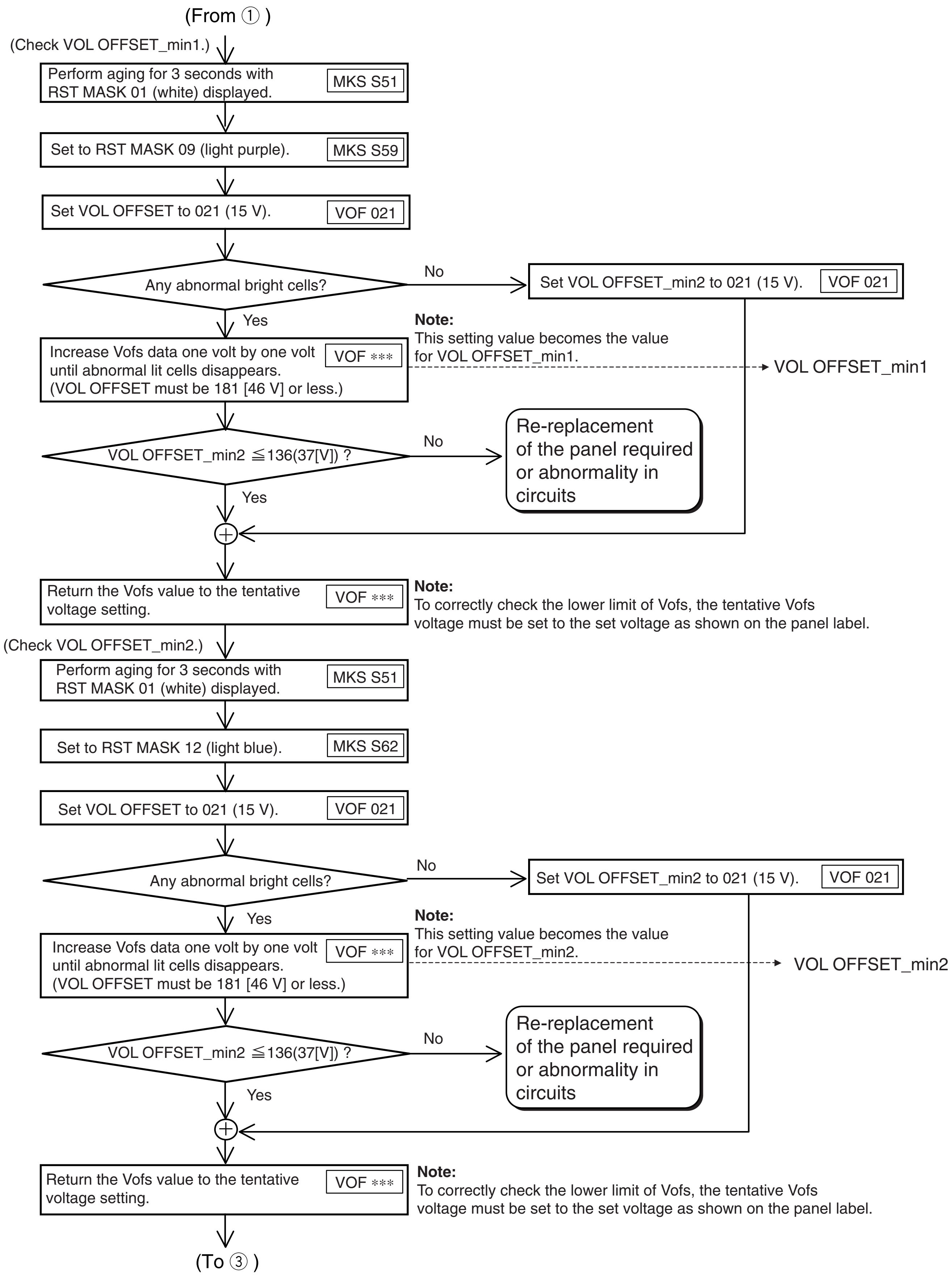
Aging

Perform aging for 3 minutes with RST MASK 01 (white) displayed. MKS S51

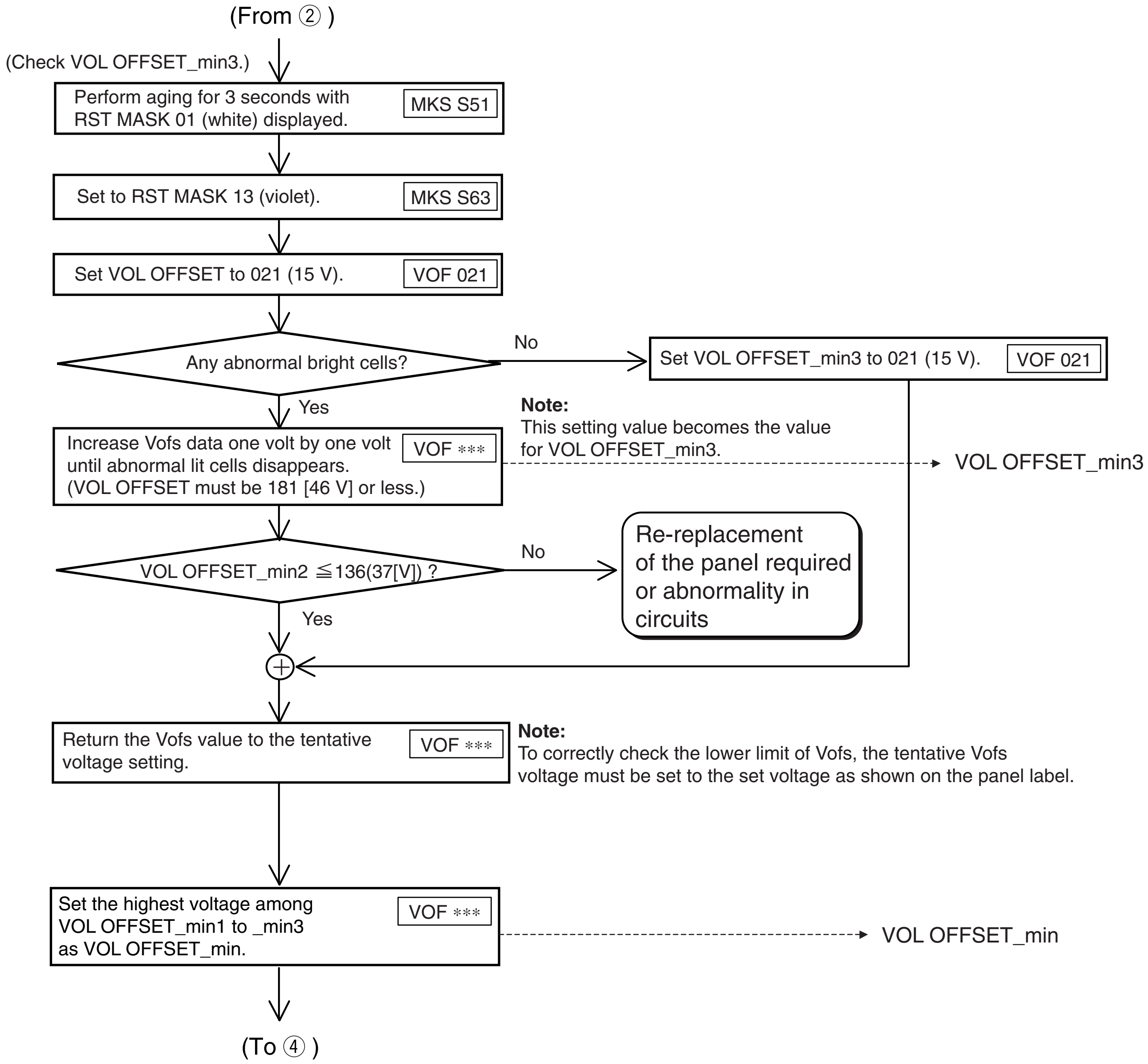
Note:
Be sure not to perform aging for more than 20 minutes.

(To ②)

② Actual Vofs adjustment (1)


(From ①)
(Check VOL OFFSET_min1.)
Perform aging for 3 seconds with RST MASK 01 (white) displayed.
MKS S51
Set to RST MASK 09 (light purple).
MKS S59
Set VOL OFFSET to 021 (15 V).
VOF 021
Any abnormal bright cells?
No
Set VOL OFFSET_min2 to 021 (15 V).
VOF 021
Yes
Note:
This setting value becomes the value for VOL OFFSET_min1.
Increase Vofs data one volt by one volt until abnormal lit cells disappears. (VOL OFFSET must be 181 [46 V] or less.)
VOF ***
VOL OFFSET_min1
VOL OFFSET_min2 ≦136(37[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Return the Vofs value to the tentative voltage setting.
VOF ***
Note:
To correctly check the lower limit of Vofs, the tentative Vofs voltage must be set to the set voltage as shown on the panel label.
(Check VOL OFFSET_min2.)
Perform aging for 3 seconds with RST MASK 01 (white) displayed.
MKS S51
Set to RST MASK 12 (light blue).
MKS S62
Set VOL OFFSET to 021 (15 V).
VOF 021
Any abnormal bright cells?
No
Set VOL OFFSET_min2 to 021 (15 V).
VOF 021
Yes
Note:
This setting value becomes the value for VOL OFFSET_min2.
Increase Vofs data one volt by one volt until abnormal lit cells disappears. (VOL OFFSET must be 181 [46 V] or less.)
VOF ***
VOL OFFSET_min2
VOL OFFSET_min2 ≦136(37[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Return the Vofs value to the tentative voltage setting.
VOF ***
Note:
To correctly check the lower limit of Vofs, the tentative Vofs voltage must be set to the set voltage as shown on the panel label.
(To ③)

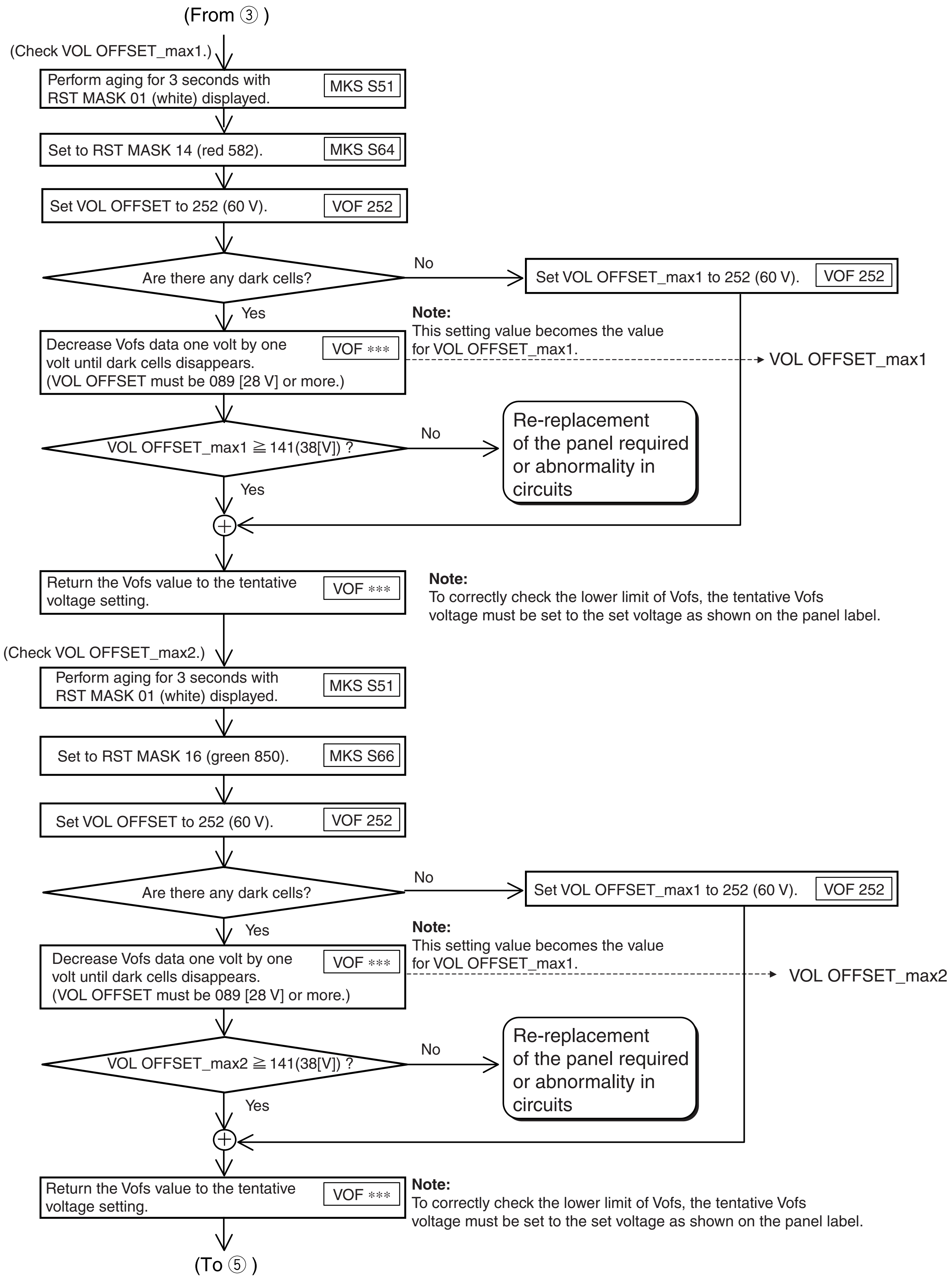
③ Actual Vofs adjustment (2)


(From ②)
(Check VOL OFFSET_min3.)
Perform aging for 3 seconds with RST MASK 01 (white) displayed.
MKS S51
Set to RST MASK 13 (violet).
MKS S63
Set VOL OFFSET to 021 (15 V).
VOF 021
Any abnormal bright cells?
No
Set VOL OFFSET_min3 to 021 (15 V).
VOF 021
Yes
Increase Vofs data one volt by one volt until abnormal lit cells disappears. (VOL OFFSET must be 181 [46 V] or less.)
VOF ***
VOL OFFSET_min3
VOL OFFSET_min2 ≦136(37[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Return the Vofs value to the tentative voltage setting.
VOF ***
Set the highest voltage among VOL OFFSET_min1 to _min3 as VOL OFFSET_min.
VOF ***
VOL OFFSET_min
(To ④)

Note:
This setting value becomes the value for VOL OFFSET_min3.

Note:
To correctly check the lower limit of Vofs, the tentative Vofs voltage must be set to the set voltage as shown on the panel label.

④ Actual Vofs adjustment (3)


(From ③)
(Check VOL OFFSET_max1.)
Perform aging for 3 seconds with RST MASK 01 (white) displayed.
MKS S51
Set to RST MASK 14 (red 582).
MKS S64
Set VOL OFFSET to 252 (60 V).
VOF 252
Are there any dark cells?
No
Set VOL OFFSET_max1 to 252 (60 V).
VOF 252
Yes
Decrease Vofs data one volt by one volt until dark cells disappears.
(VOL OFFSET must be 089 [28 V] or more.)
VOF ***
VOL OFFSET_max1
VOL OFFSET_max1 ≧ 141(38[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Return the Vofs value to the tentative voltage setting.
VOF ***
(Check VOL OFFSET_max2.)
Perform aging for 3 seconds with RST MASK 01 (white) displayed.
MKS S51
Set to RST MASK 16 (green 850).
MKS S66
Set VOL OFFSET to 252 (60 V).
VOF 252
Are there any dark cells?
No
Set VOL OFFSET_max1 to 252 (60 V).
VOF 252
Yes
Decrease Vofs data one volt by one volt until dark cells disappears.
(VOL OFFSET must be 089 [28 V] or more.)
VOF ***
VOL OFFSET_max2
VOL OFFSET_max2 ≧ 141(38[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Return the Vofs value to the tentative voltage setting.
VOF ***
(To ⑤)

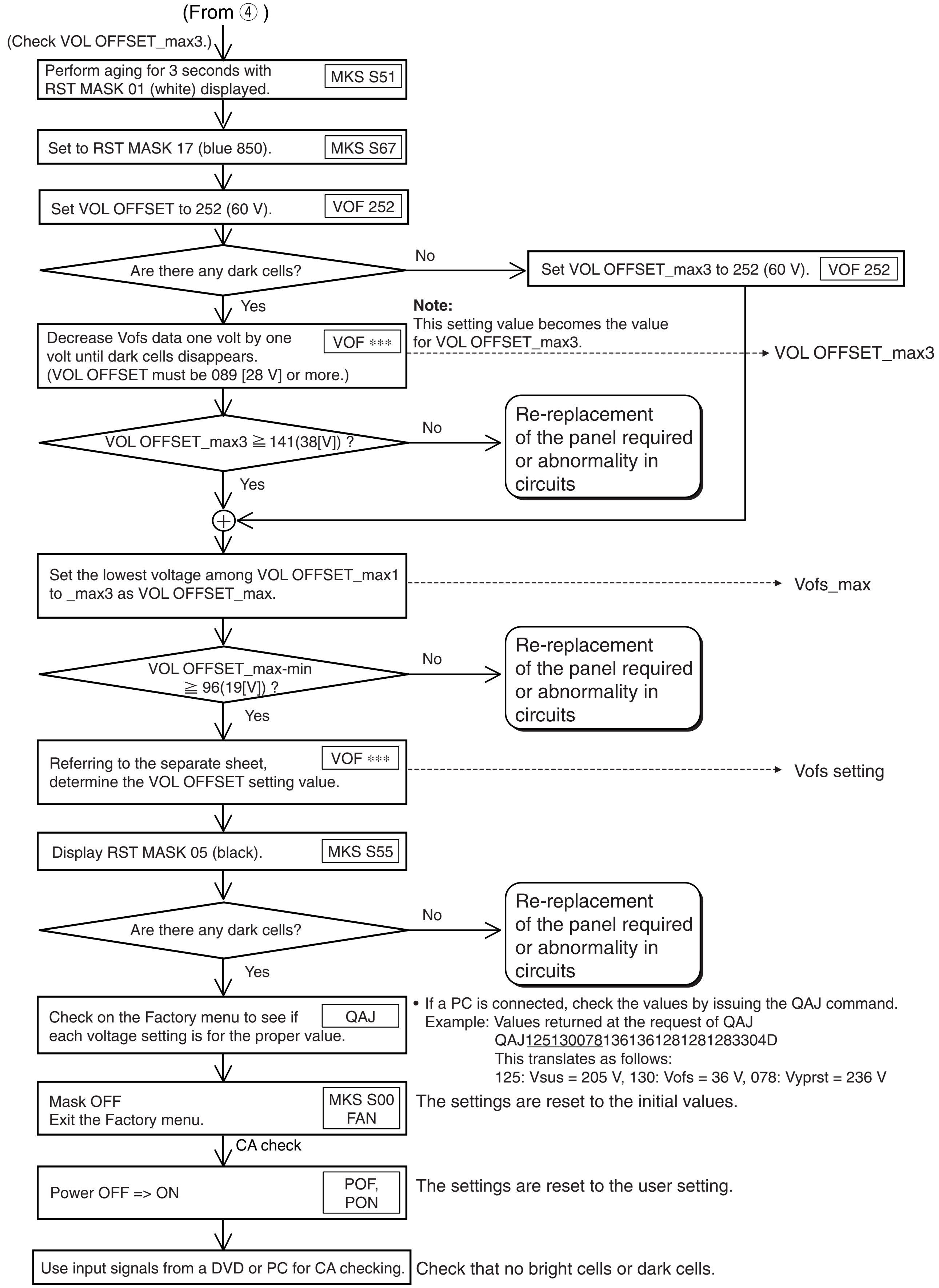
Note:
This setting value becomes the value for VOL OFFSET_max1.

Note:
To correctly check the lower limit of Vofs, the tentative Vofs voltage must be set to the set voltage as shown on the panel label.

Note:
This setting value becomes the value for VOL OFFSET_max1.

Note:
To correctly check the lower limit of Vofs, the tentative Vofs voltage must be set to the set voltage as shown on the panel label.

⑤ Actual Vofs adjustment (4)


(From ④)
(Check VOL OFFSET_max3.)
Perform aging for 3 seconds with RST MASK 01 (white) displayed.
MKS S51
Set to RST MASK 17 (blue 850).
MKS S67
Set VOL OFFSET to 252 (60 V).
VOF 252
Are there any dark cells?
No
Set VOL OFFSET_max3 to 252 (60 V).
VOF 252
Yes
Decrease Vofs data one volt by one volt until dark cells disappears.
(VOL OFFSET must be 089 [28 V] or more.)
VOF ***
VOL OFFSET_max3
VOL OFFSET_max3 ≧ 141(38[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Set the lowest voltage among VOL OFFSET_max1 to _max3 as VOL OFFSET_max.
Vofs_max
VOL OFFSET_max-min ≧ 96(19[V]) ?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Referring to the separate sheet, determine the VOL OFFSET setting value.
VOF ***
Vofs setting
Display RST MASK 05 (black).
MKS S55
Are there any dark cells?
No
Re-replacement of the panel required or abnormality in circuits
Yes
Check on the Factory menu to see if each voltage setting is for the proper value.
QAJ
Mask OFF
Exit the Factory menu.
MKS S00
FAN
CA check
Power OFF => ON
POF,
PON
Use input signals from a DVD or PC for CA checking.

Note:
This setting value becomes the value for VOL OFFSET_max3.

- If a PC is connected, check the values by issuing the QAJ command.
  Example: Values returned at the request of QAJ
  QAJ1251300781361361281281283304D
  This translates as follows:
  125: Vsus = 205 V, 130: Vofs = 36 V, 078: Vyprst = 236 V

The settings are reset to the initial values.

The settings are reset to the user setting.

Check that no bright cells or dark cells.

Conversion charts for electronic VRs

Vofs (V)	Setting Value (Step)
14	15
15	21
16	26
17	31
18	36
19	42
20	47
21	52
22	58
23	63
24	68
25	73
26	79
27	84
28	89
29	94
30	99
31	104
32	110
33	115
34	120
35	125
36	130
37	136
38	141
39	146
40	151
41	155
42	160
43	165
44	170
45	175
46	180
47	185
48	191
49	196
50	201
51	206
52	211
53	216
54	222
55	227
56	232
57	237
58	242
59	248
60	255

Vprst (V)	Setting Value (Step)
213	3
214	6
215	9
216	12
217	16
218	18
219	21
220	25
221	28
222	31
223	35
224	38
225	41
226	45
227	48
228	51
229	55
230	58
231	62
232	64
233	68
234	71
235	74
236	78
237	81
238	84
239	88
240	91
241	95
242	98
243	101
244	105
245	108
246	112
247	115
248	119
249	121
250	124
251	128
252	131
253	135
254	138
255	141
256	145
257	148
258	152
259	155

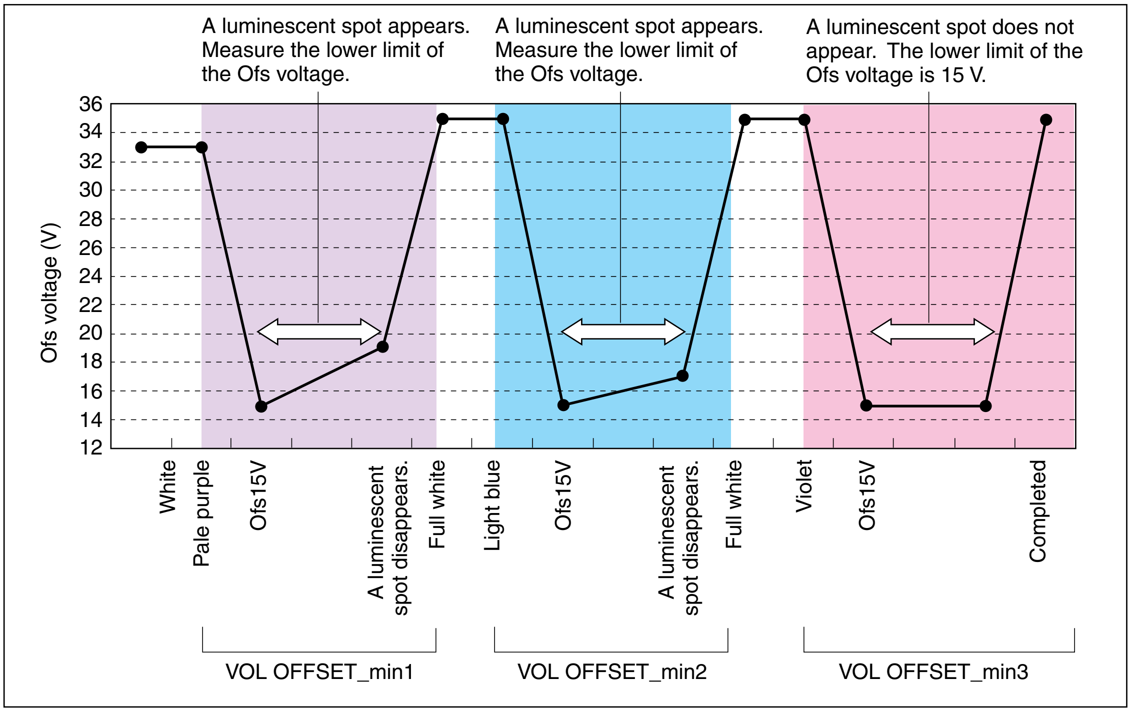
Vprst (V)	Setting Value (Step)
260	158
261	162
262	165
263	168
264	171
265	174
266	177
267	181
268	184
269	188
270	191
271	195
272	198
273	201
274	205
275	208
276	211
277	214
278	217
279	221
280	224

Vofs Setting Values

		Vofs upper limit																						
		141	146	151	155	160	165	170	175	180	185	191	196	201	206	211	216	222	227	232	237	242	248	255
Vofs lower limit	21	89	89	89	89	94	94	99	99	104	104	110	110	115	115	120	120	125	125	130	125	130	125	130
	26	89	89	89	94	94	99	99	104	104	110	110	115	115	120	120	125	125	125	130	125	130	125	130
	31	89	89	94	94	99	99	104	104	110	110	115	115	120	120	125	125	130	125	130	125	130	125	130
	36	89	94	94	99	99	104	104	110	110	115	115	120	120	125	125	125	130	125	130	125	130	125	130
	42	94	94	99	99	104	104	110	110	115	115	120	120	125	125	130	125	130	125	130	125	130	125	130
	47	-	99	99	104	104	110	110	115	115	120	120	125	125	125	130	125	130	125	130	125	130	130	130
	52	-	-	104	104	110	110	115	115	120	120	125	125	130	125	130	125	130	125	130	130	130	136	136
	58	-	-	-	110	110	115	115	120	120	125	125	125	130	125	130	125	130	130	130	136	136	136	141
	63	-	-	-	-	115	115	120	120	125	125	130	125	130	125	130	130	130	136	136	136	141	141	141
	68	-	-	-	-	-	120	120	125	125	130	130	125	130	130	130	136	136	136	141	141	141	146	146
	73	-	-	-	-	-	-	125	125	130	130	130	130	130	136	136	136	141	141	141	146	146	146	151
	79	-	-	-	-	-	-	-	125	130	130	130	136	136	136	141	141	141	146	146	146	151	151	151
	84	-	-	-	-	-	-	-	-	130	136	136	136	14	141	141	146	146	146	151	151	151	155	155
	89	-	-	-	-	-	-	-	-	-	136	141	141	141	146	146	146	151	151	151	155	155	155	160
	94	-	-	-	-	-	-	-	-	-	-	141	146	146	146	151	151	151	155	155	155	160	160	160
	99	-	-	-	-	-	-	-	-	-	-	-	146	151	151	151	155	155	155	160	160	160	165	165
	104	-	-	-	-	-	-	-	-	-	-	-	-	151	155	155	155	160	160	160	165	165	165	170
	110	-	-	-	-	-	-	-	-	-	-	-	-	-	155	160	160	160	165	165	165	170	170	170
	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	165	165	165	170	170	170	175	175
	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	170	170	170	175	175	175	180
	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170	175	175	175	180	180	180
	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	180	180	180	180	180
	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	180	180	180	180

Transition of the Ofs voltage during adjustment of VOL OFFSET_min

Example:
Initial value of the set Ofs: 33 V
Tentative set value of Ofs (Ofs set value for the panel inspection): 35 V
VOL OFFSET_min1 (pale purpel): 19 V
VOL OFFSET_min2 (light blue): 17 V
VOL OFFSET_min3 (violet): 15 V



- The transition process for VOL OFFSET_max is the same as the above.

7.5 ADJUSTMENTS WHEN THE DRIVE ASSYS ARE REPLACED

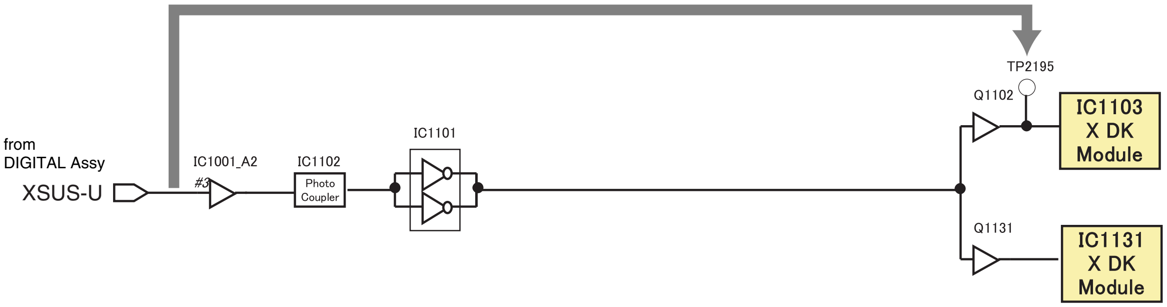
■ 50 FHD X DRIVE Assy

Object parts

Ref. No.	Part Category	Part No.
IC1206	Photo Coupler	PS9117-TLB
IC1207	FET Driver	TND307TD-TBB
IC1210	FET Driver	TND307TD-TBB

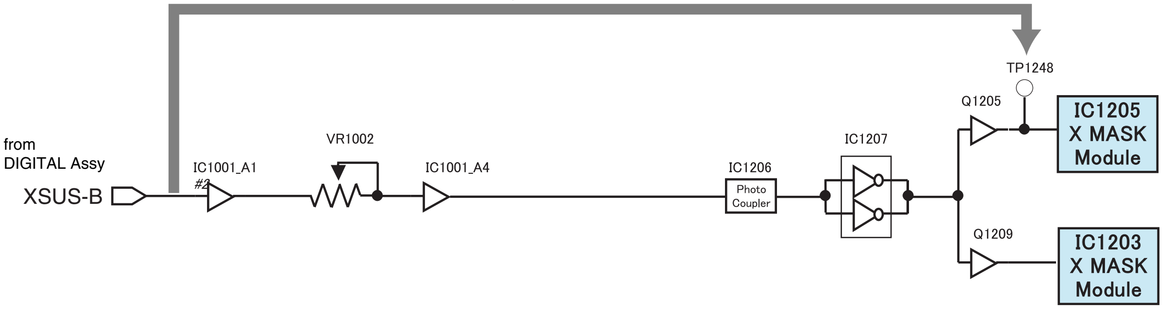
SUS-B ADJUSTMENT

① Measure the SUS-U input delay time (Δ Tsus-u).



TP2195
Q1102
IC1103
X DK
Module
IC1101
from
DIGITAL Assy
IC1001_A2
IC1102
XSUS-U
#3
Photo
Coupler
Q1131
IC1131
X DK
Module

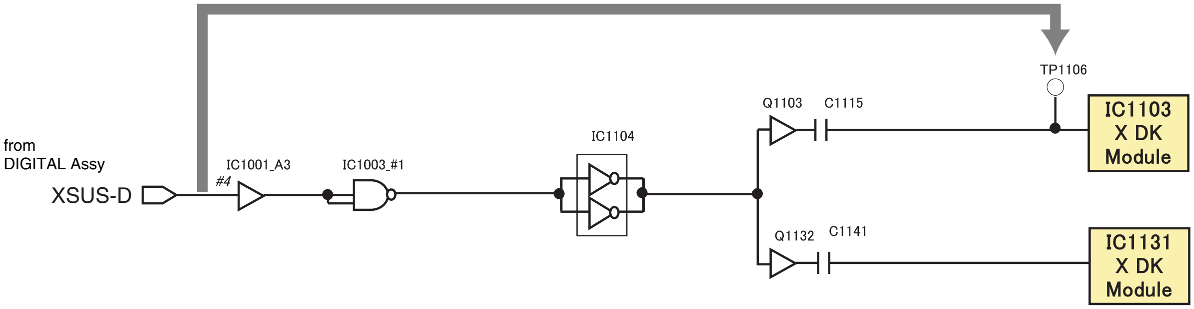
② Adjust the SUS-B input delay time so that it becomes "Δ Tsus-u + α ± 5 nsec."



TP1248
Q1205
IC1205
X MASK
Module
from
DIGITAL Assy
VR1002
IC1207
IC1001_A1
IC1001_A4
IC1206
XSUS-B
#2
Photo
Coupler
Q1209
IC1203
X MASK
Module

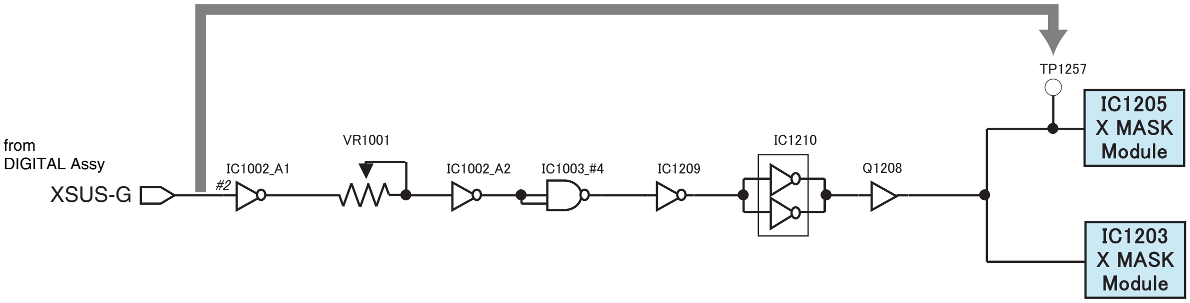
SUS-G ADJUSTMENT

① Measure the SUS-D input delay time (Δ Tsus-d).



TP1106
Q1103
C1115
IC1103
X DK
Module
IC1104
from
DIGITAL Assy
IC1001_A3
IC1003_#1
XSUS-D
#4
Q1132
C1141
IC1131
X DK
Module

② Adjust the SUS-G input delay time so that it becomes "Δ Tsus-d + β ± 5 nsec."



TP1257
IC1205
X MASK
Module
VR1001
IC1210
from
DIGITAL Assy
IC1002_A1
IC1002_A2
IC1003_#4
IC1209
Q1208
XSUS-G
#2
IC1203
X MASK
Module

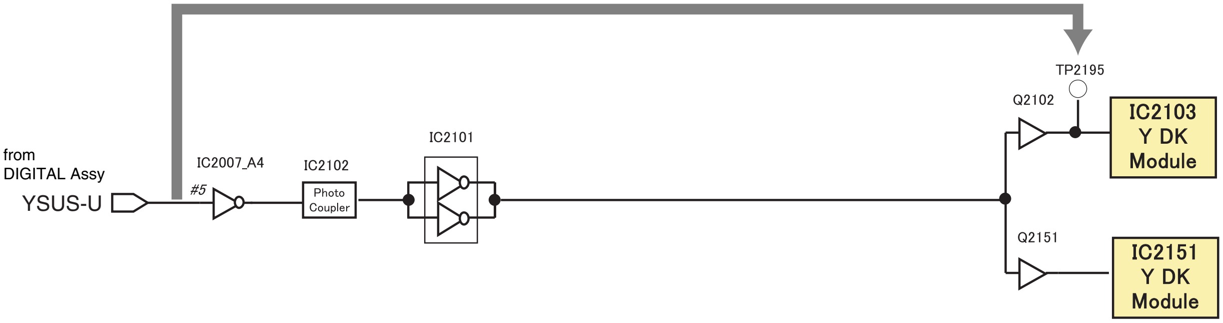
50FHD Y DRIVE Assy

Object parts

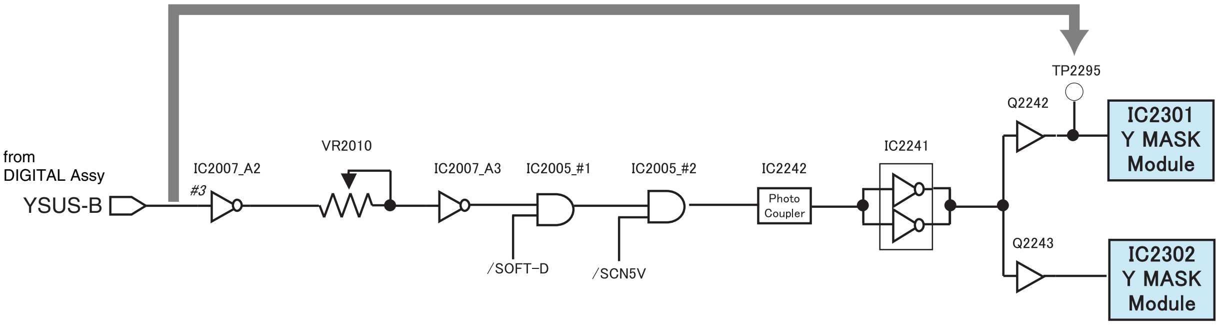
Ref. No.	Part Category	Part No.
IC2242	Photo Coupler	PS9117-TLB
IC2241	FET Driver	TND307TD-TBB
IC2252	FET Driver	TND307TD-TBB

SUS-B ADJUSTMENT

① Measure the SUS-U input delay time (Δ Tsus-u).

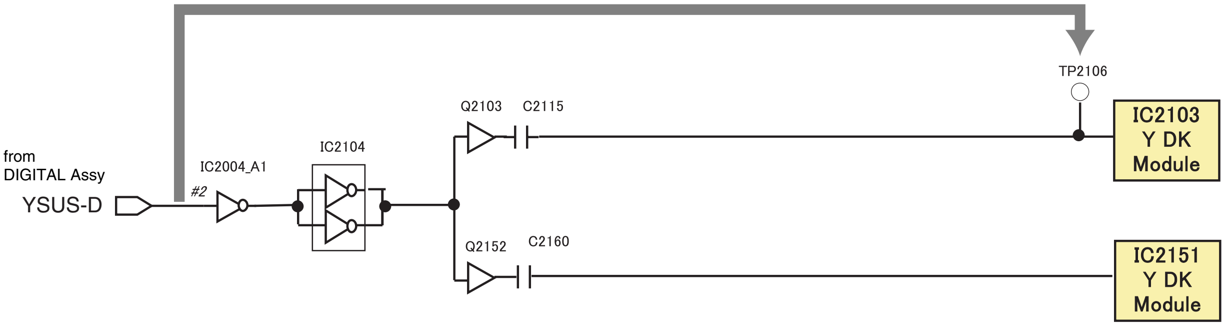

TP2195
Q2102
IC2103
Y DK
Module
IC2101
from
DIGITAL Assy
IC2007_A4
IC2102
#5
YSUS-U
Photo
Coupler
Q2151
IC2151
Y DK
Module

② Adjust the SUS-B input delay time so that it becomes "Δ Tsus-u + α ± 5 nsec."

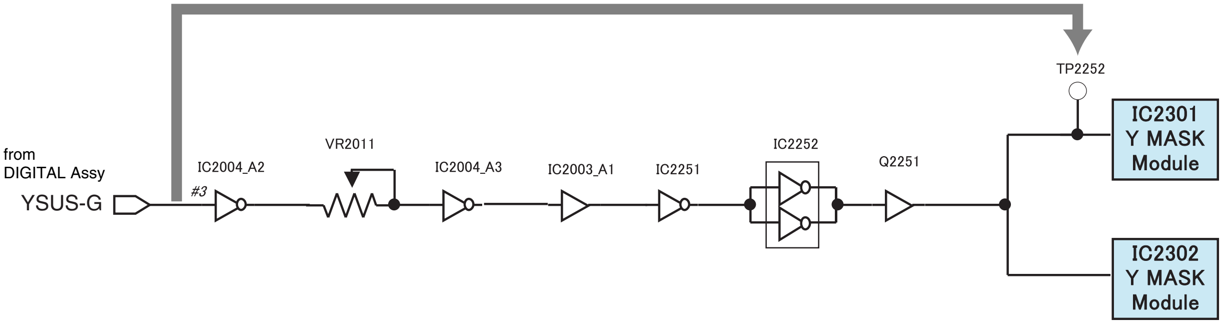

TP2295
Q2242
IC2301
Y MASK
Module
IC2241
VR2010
from
DIGITAL Assy
IC2007_A2
IC2007_A3
IC2005_#1
IC2005_#2
IC2242
#3
YSUS-B
Photo
Coupler
/SOFT-D
/SCN5V
Q2243
IC2302
Y MASK
Module

SUS-G ADJUSTMENT

① Measure the SUS-D input delay time (Δ Tsus-d).


TP2106
Q2103
C2115
IC2103
Y DK
Module
IC2104
from
DIGITAL Assy
IC2004_A1
#2
YSUS-D
Q2152
C2160
IC2151
Y DK
Module

② Adjust the SUS-G input delay time so that it becomes "Δ Tsus-d + β ± 5 nsec."

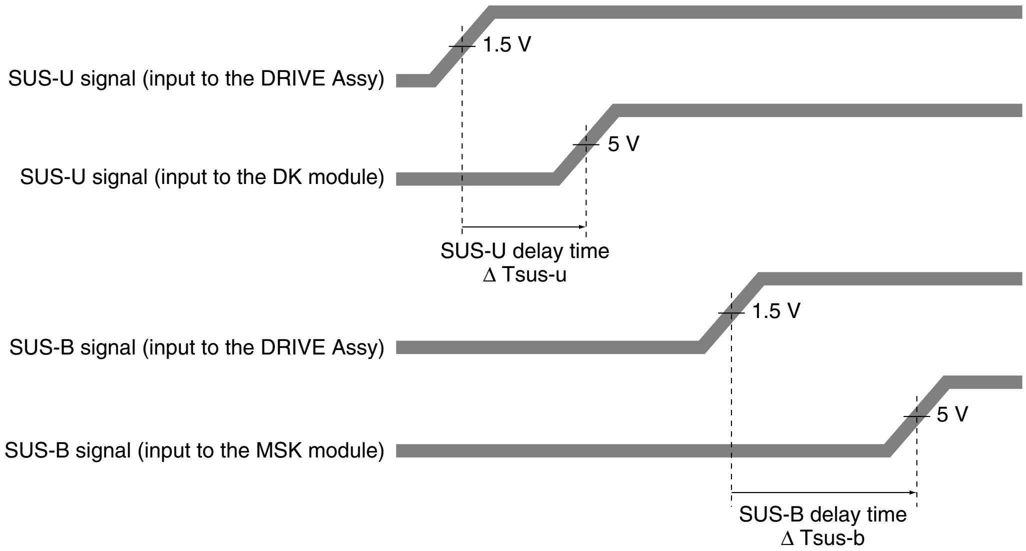

TP2252
IC2301
Y MASK
Module
VR2011
IC2252
from
DIGITAL Assy
IC2004_A2
IC2004_A3
IC2003_A1
IC2251
Q2251
#3
YSUS-G
IC2302
Y MASK
Module

DELAY ADJUSTMENT OF THE CONTROL SIGNAL (SUS-B)

① Measure the delay time for the SUS-U signal.

② Check the delay time for the SUS-B signal.
Adjust the variable control so that the SUS-B delay time becomes "SUS-U delay time + α ± 5 nsec."

Note: For details on measuring points of waveform, see the figure below.


SUS-U signal (input to the DRIVE Assy)
1.5 V
SUS-U signal (input to the DK module)
5 V
SUS-U delay time
Δ Tsus-u
SUS-B signal (input to the DRIVE Assy)
1.5 V
SUS-B signal (input to the MSK module)
5 V
SUS-B delay time
Δ Tsus-b

SUS-B delay time: Δ Tsus-b
Adjust so that "Δ Tsus-b = Δ Tsus-u + α ± 5 nsec," using the variable controls shown in the table below:

Value of α

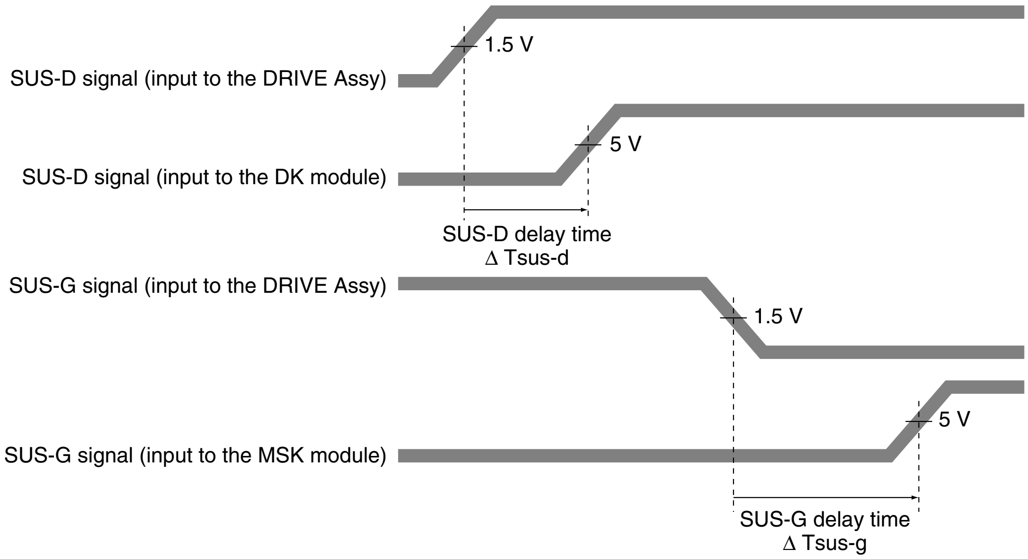
Assy	VR	Time
X DRIVE	VR1002	70 nsec
Y DRIVE	VR2010	85 nsec

DELAY ADJUSTMENT OF THE CONTROL SIGNAL (SUS-G)

① Measure the delay time for the SUS-D signal.

② Check the delay time for the SUS-G signal.
Adjust the variable control so that the SUS-G delay time becomes "SUS-D delay time + β ± 5 nsec."

Note: For details on measuring points of waveform, see the figure below.


SUS-D signal (input to the DRIVE Assy)
1.5 V
SUS-D signal (input to the DK module)
5 V
SUS-D delay time
Δ Tsus-d
SUS-G signal (input to the DRIVE Assy)
1.5 V
SUS-G signal (input to the MSK module)
5 V
SUS-G delay time
Δ Tsus-g

SUS-G delay time: Δ Tsus-g
Adjust so that "Δ Tsus-g = Δ Tsus-d + β ± 5 nsec," using the variable controls shown in the table below:

Value of β

Assy	VR	Time
X DRIVE	VR1001	120 nsec
Y DRIVE	VR2011	100 nsec

7.6 HOW TO CLEAR VARIOUS LOGS

■ Clearance of various logs after the Assys are replaced

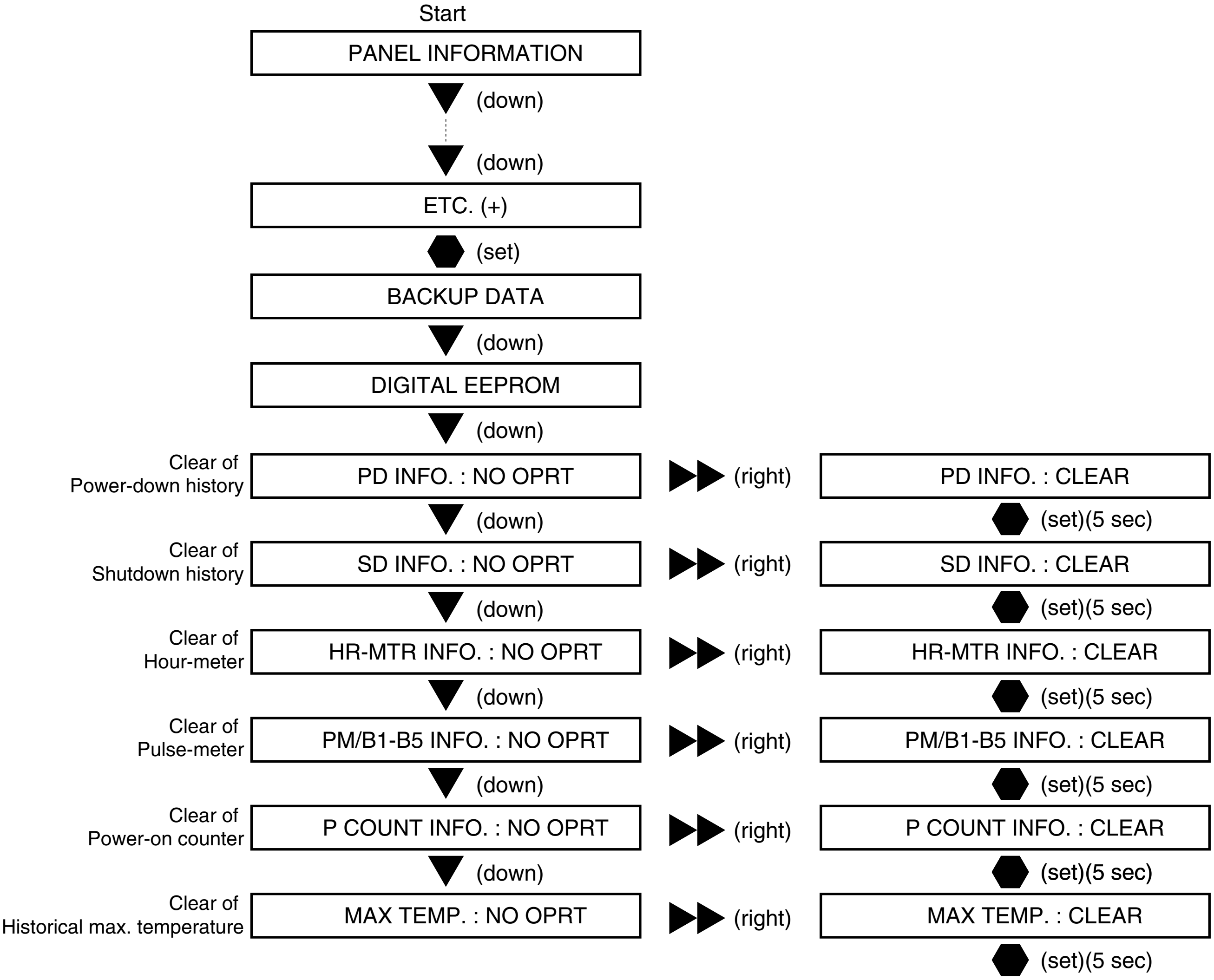
Besides adjustment data, data on accumulated power-on time and logs on defective parts of the product are backed up. Some of those data must be cleared after the Assys are replaced for service.

Clearance of logs, using the RS-232C commands

Item	Content	When the Panel is replaced	When the POWER SUPPLY Unit is replaced	When the Other parts is replaced	RS-232C Commands
Hour-meter	Accumulated power-on time	Must be cleared	No need to be cleared	No need to be cleared	CHM
Shutdown history	Cause of an SD and hour-meter count	Must be cleared	No need to be cleared	No need to be cleared	CSD
Power-down history	Cause of an PD and hour-meter count	Must be cleared	No need to be cleared	No need to be cleared	CPD
Pulse-meter	Accumulated number of pulses emitted (five blocks)	Must be cleared (mandatory)	No need to be cleared	No need to be cleared	CPM
Power-on counter	Relay-on count	No need to be cleared	Must be cleared (mandatory)	No need to be cleared	CPC
MAX_TEMP	Historical max. temperature	Must be cleared	Must be cleared	Must be cleared	CMT

Notes:
- As the pulse-meter count is used for each correction function, it must be cleared when an Assy relevant to correction functions is replaced.
- When clearing logs, using the RS-232C commands, first enter Factory mode (by issuing FAY or PFY), then issue the corresponding command.

Clearance of logs, using the Factory menu

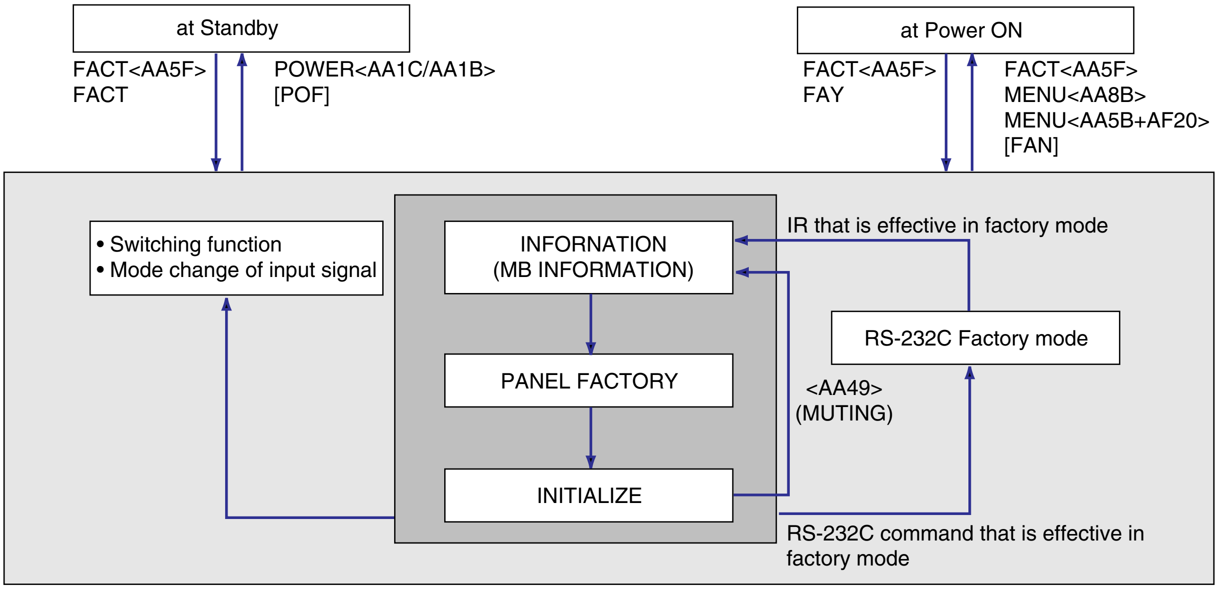

Start
PANEL INFORMATION
(down)
(down)
ETC. (+)
(set)
BACKUP DATA
(down)
DIGITAL EEPROM
(down)
Clear of Power-down history
PD INFO. : NO OPRT
(right)
PD INFO. : CLEAR
(set)(5 sec)
(down)
Clear of Shutdown history
SD INFO. : NO OPRT
(right)
SD INFO. : CLEAR
(set)(5 sec)
(down)
Clear of Hour-meter
HR-MTR INFO. : NO OPRT
(right)
HR-MTR INFO. : CLEAR
(set)(5 sec)
(down)
Clear of Pulse-meter
PM/B1-B5 INFO. : NO OPRT
(right)
PM/B1-B5 INFO. : CLEAR
(set)(5 sec)
(down)
Clear of Power-on counter
P COUNT INFO. : NO OPRT
(right)
P COUNT INFO. : CLEAR
(set)(5 sec)
(down)
Clear of Historical max. temperature
MAX TEMP. : NO OPRT
(right)
MAX TEMP. : CLEAR
(set)(5 sec)

8. SERVICE FACTORY MODE

8.1 SERVICE FACTORY MODE OUTLINE

Operations during Service/Factory mode are described here.

8.1.1 TRANSITION DIAGRAM OF SERVICE FACTORY MODE



at Standby
FACT<AA5F>
FACT
POWER<AA1C/AA1B>
[POF]
at Power ON
FACT<AA5F>
FAY
FACT<AA5F>
MENU<AA8B>
MENU<AA5B+AF20>
[FAN]
• Switching function
• Mode change of input signal
INFORNATION
(MB INFORMATION)
PANEL FACTORY
INITIALIZE
IR that is effective in factory mode
RS-232C Factory mode
<AA49>
(MUTING)
RS-232C command that is effective in factory mode

8.1.2 HOW TO ENTER/EXIT SERVICE FACTORY MODE

■ How to enter Service Factory mode

By using a remote control unit for servicing:
- Press the FACTORY1 key on the remote control unit for servicing.

By issuing RS-232C commands:
- During normal Standby mode: Issue "PON" then "FAY."
- During normal operation mode: Issue "FAY."

■ How to exit Service Factory mode

By using a remote control unit for servicing:
- Remote control unit for servicing: Press the FACTORY1 key.
- Remote control unit supplied: Press the HOME MENU key.

By issuing RS-232C commands:
- Issue "FAN."

8.1.3 OPERATION OF SERVICE FACTORY MODE

● Functions whose settings are set to OFF

The following functions are set to off when Service Factory mode is entered (including when the FAY command is received).

Table 1. Functions whose settings are set to OFF

Function	Remarks	Function	Remarks
2-screen operation	The main input signal is displayed.	ORBITER	Center-value operation
Mask control	Panel mask		

● User data

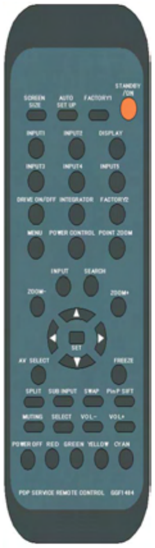
User data will be treated as follows:

- User data on picture- and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Factory mode, the current audio-quality adjustment data will still be retained in memory.
- As to data on various settings, user data will be applied to the items that are associated with signal format change (screen size switching, etc.).
- Data on screen (i.e., screen position; meaning clock dividers, and not including data on screen size) are reset to the default values (data stored in memory will be retained). Screen size will be retained.

8.1.4 REMOTE CONTROL CODE

Table 2. Functions of the keys on the remote control unit while in Service Factory mode

SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item (top)
(▲) UP	Switching the sub items	Shifting upward to the next upper layer
(▼) DOWN	Switching the sub items	Shifting downward to the next subtitled item
(◄) LEFT	Decreasing the adjustment value	Decreasing the adjustment value/Modify setting of selections.
(►) RIGHT	Increasing the adjustment value	Increasing the adjustment value/Modify setting of selections.
SET	Switching layers	Shifting downward or upward to the next lower or upper layer/Decision
INPUT	Selecting input	Shifting the input to the next function
INPUT **	Selecting input	Switching the input to (**=1 to 6)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off (Factory remote control)
MENU	Menu ON	Turning Service Factory mode off and Menu mode on
DRIVE ON/OFF	DRIVE OFF	Turning the Drive mode off (Factory remote control)
VOLUME+	Volume UP.	Increasing 10 the adjustment value. (PANEL FACTORY)
VOLUME-	Volume DOWN.	Increasing 10 the adjustment value. (PANEL FACTORY)


STANDBY /ON
SCREEN SIZE
AUTO SET UP
FACTORY1
INPUT1
INPUT2
DISPLAY
INPUT3
INPUT4
INPUT5
DRIVE ON/OFF
INTEGRATOR
FACTORY2
MENU
POWER CONTROL
POINT ZOOM
INPUT
SEARCH
ZOOM-
ZOOM+
SET
AV SELECT
FREEZE
SPLIT
SUB INPUT
SWAP
PinP SIFT
MUTING
SELECT
VOL-
VOL+
POWER OFF
RED
GREEN
YELLOW
CYAN
PDP SERVICE REMOTE CONTROL GGF1484

Factory remote control unit

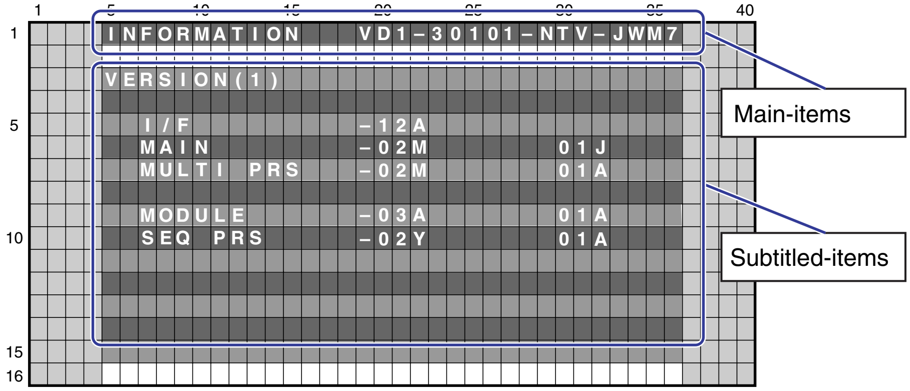
8.1.5 CONFIGURATION OF FACTORY MODE

Configuration of Factory Mode

Uppermost Layer Item	Middle Layer Item	Lower Nested Layer Item	Variable / Adjustment Range	Remarks
8.2.1 INFORMATION				
	8.2.1.1 VERSION (1)			
	8.2.1.2 MAIN NG	CLEAR <=>	NO <=> YES	
	8.2.1.3 TEMPERATURE			
	8.2.1.4 HOUR METER			
	8.2.1.5 HDMI SIGNAL INFO 1 and 2			
	8.2.1.6 VDEC SIGNAL INFO			
8.2.2 PANEL FACTORY (+)				
	8.2.2.1 PANEL INFORMATION			
	8.2.2.2 PANEL WORKS			
	8.2.2.3 POWER DOWN			
	8.2.2.4 SHUT DOWN			
	8.2.2.5 PANEL-1 ADJ (+)	X-SUS B <=>	120 to 136	Equivalent to XSB
		Y-SUS B <=>	120 to 136	Equivalent to YSB
		Y-SUSTAIL T1 <=>	120 to 136	Equivalent to YTG
		Y-SUSTAIL T2 <=>	120 to 136	Equivalent to YTB
		Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
		XY-RST W1 <=>	120 to 136	Equivalent to RSW
		XY-RST W2 <=>	120 to 136	Equivalent to RYW
		VOL SUS <=>	000 to 255	Equivalent to VSU
		VOL OFFSET <=>	000 to 255	Equivalent to VOF
		VOL RST P <=>	000 to 255	Equivalent to VRP
		SUS FREQ. <=>	MODE 1 to MODE 8	Equivalent to SFR
	8.2.2.6 PANEL-2 ADJ (+)	R-HIGH <=>	000 to 511	Equivalent to PRH
		G-HIGH <=>	000 to 511	Equivalent to PGH
		B-HIGH <=>	000 to 511	Equivalent to PBH
		R-LOW <=>	000 to 999	Equivalent to PRL
		G-LOW <=>	000 to 999	Equivalent to PGL
		B-LOW <=>	000 to 999	Equivalent to PBL
		ABL <=>	000 to 255	Equivalent to ABL
	8.2.2.7 PANEL REVISE (+)	R-LEVEL <=>	LV-0 to LV-7	Equivalent to RRL
		G-LEVEL <=>	LV-0 to LV-7	Equivalent to RGL
		B-LEVEL <=>	LV-0 to LV-7	Equivalent to RBL
	8.2.2.8 ETC. (+)	BACKUP DATA <=>	NO OPRT <=> TRANSFER or ERR	Equivalent to BCP
		DIGITAL EEPROM <=>	NO OPRT <=> DELETE/REPAIR	Equivalent to FAJ/UAJ
		PD INFO. <=>	NO OPRT <=> CLEAR	Equivalent to CPD
		SD INFO. <=>	NO OPRT <=> CLEAR	Equivalent to CSD
		HR-MTR INFO. <=>	NO OPRT <=> CLEAR	Equivalent to CHM
		PM/B1-B5 <=>	NO OPRT <=> CLEAR	Equivalent to CPM
		P COUNT INFO. <=>	NO OPRT <=> CLEAR	Equivalent to CPC
		MAX TEMP. <=>	NO OPRT <=> CLEAR	Equivalent to CMT
	8.2.2.9 RASTER MASK SETUP (+)	MASK OFF	<=> 48V <=> 50V <=> 60V <=> 60P <=> 70P <=> 72P <=> 75V <=>	Equivalent to MKS+S00
		RST MASK 01 <=>		Equivalent to MKS+S51
		• • •		• • •
		RST MASK 24 <=>		Equivalent to MKS+S74
	8.2.2.10 PATTEN MASK SETUP (+)	MASK OFF	<=> 48V <=> 50V <=> 60V <=> 60P <=> 70P <=> 72P <=> 75V <=>	Equivalent to MKS+S00
		PTN MASK 01 <=>		Equivalent to MKS+S01
		• • •		• • •
		PTN MASK 39 <=>		Equivalent to MKS+S10
	8.2.2.11 COMBI MASK SETUP (+)	MASK OFF	<=> 48V <=> 50V <=> 60V <=> 60P <=> 70P <=> 72P <=> 75V <=>	Equivalent to MKC+S00
		CMB MASK 01 <=>		Equivalent to MKC+S01
		• • •		• • •
		CMB MASK 10 <=>		Equivalent to MKC+S10
8.2.3 INITIALIZE				
	8.2.3.1 SYNC DET (+)			for the technical use
	8.2.3.2 SG MODE		SG OFF <=> • • •	
	8.2.3.3 SG PATTERN		SG PATTERN <=> COLOR BAR 1 • • •	
	8.2.3.4 SIDE MASK LEVEL (+)	R MASK LEVEL <=>	000 to 255	Not available. Changing of the SIDE MASK LEVEL is possible in Integrator mode.
		G MASK LEVEL <=>	000 to 255	
		B MASK LEVEL <=>	000 to 255	
	8.2.3.5 FINAL SETUP (+)	DATA RESET <=>	OFF <=> JP ON <=> US ON <=> EU ON	
	8.2.3.6 HDMI INTR POSITION (+)	INTR-POS1 (0x75) <=>	001	for the technical use

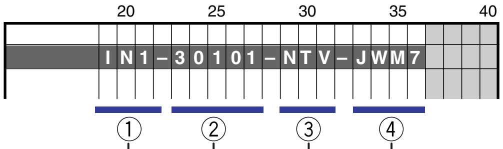
8.1.6 INDICATION (OSD) OF SERVICE FACTORY MODE

- With the 6th- and 7th-generation models, the OSD indication in Factory mode is in white on a green background.



```
INFORMATION   VD1-30101-NTV-JWM7

VERSION(1)

  I/F         -12A
  MAIN        -02M      01J
  MULTI PRS   -02M      01A

  MODULE      -03A      01A
  SEQ PRS     -02Y      01A
```

Main-item indications



```
IN1-30101-NTV-JWM7
```

① Input function

Input Functions	On-Screen Display
INPUT 1- 6	IP1 - 6

② Input signal mode and screen size

Note: See SIG-Mode Tables. (See next page.)

③ Color system and signal type

Input Signal Type	Color System	On-Screen Display
Composite input	NTSC	NTV
	PAL	PLV
	PAL M	PMV
	PAL N	PNV
	SECAM	SCV
	4.43 NTSC	4NV
	BLACK/WHITE	BWV
S terminal input	NTSC	NTS
	PAL	PLS
	PAL M	PMS
	PAL N	PNS
	SECAM	SCS
	4.43 NTSC	4NS
	BLACK/WHITE	BWS
Y/Cb/Cr Input		CBR
Y/Pb/Pr Input		PBR
RGB Input		RGB
Digital Input		DIG

④ Destination

Destination	On-Screen Display
FullHD monitor (for Japan)	JWM7*
FullHD monitor (for North America)	AWM7*
FullHD monitor (for Europe)	EWM7*
7th-generation model	***7

● Input signal-Mode Table

1st and 2nd charecters : Resolutin of the input signal (numerics for the video signals, and alphabetics for the PC signals)
3rd and 4th charecters : Refresh rate of the input signal
5th charecter : Selection of the screen size

Input signal mode table for video signals (resolutions and V frequencies)

1st and 2nd	3rd and 4th	Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.625
20	50	SDTV*625p	50.000	31.250
30	50	HDTV*1125i	50.000	28.125
40	50	HDTV*750p	50.000	37.500
10	60	SDTV*525i	60.000	15.734
20	60	SDTV*525p	60.000	31.469
30	60	HDTV*1125i	60.000	33.750
40	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000
50	50	HDTV*1125p	50.000	56.25
50	60	HDTV*1125p	60.000	67.5

Fv: Vertical Frequency, Fh: Horizontal Frequency

Input signal mode table for PC signals (resolutions and V frequencies)

1st and 2nd	3rd and 4th	Signal Type	Fv (Hz)	Fh (kHz)
C1	70	720 x 400	70.08	31.46
C2	60	640 x 480	60.00	31.50
	72		72.80	37.90
	75		75.00	37.50
C4	56	800 x 600	56.00	35.20
	60		60.00	37.90
	72		72.00	48.10
	75		75.00	46.90
C6	60	1280 x 720	60.00	44.70
C7	60	1024 x 768	60.00	48.40
	70		70.00	56.50
	75		75.00	60.00
C8	56	1280 x 768	56.25	45.10
	60		59.87	47.80
	70		69.84	56.10
D1	75	1152 x 864	75.00	67.50
D4	60	1600 x 900	59.8	55.93
D5	60	1280 x 960	60.00	60.00
D6	60	1280 x 1024	60.02	63.981
	75		75.025	79.976
D7	60	1400 x 1050	59.978	65.317
	75		74.867	82.278
D8	60	11680 x 1050	59.954	65.29
D9	60	1920 x 1080	60	67.5
E0	60	1600 x 1200	60	75
E1	60	1920 x 1200	59.95	74.038

Fv: Vertical Frequency, Fh: Horizontal Frequency

Current selection of the screen size

5th	Description on GUI	VIDEO	PC	Remarks
0	DOT BY DOT	●	●	
1	4:3	●	●	
2	FULL (FULL1)	●	●	
3	ZOOM	●	–	
4	CINEMA	●	–	
5	WIDE	●	–	
6	FULL 14:9	●	–	
7	CINEMA 14:9	●	–	
8	FULL2	●	–	For Japan only

●: available, –: not available

8.2 FACTORY MENU

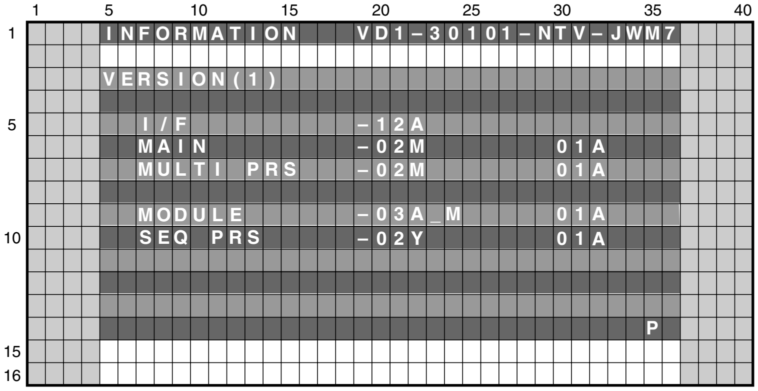
● Operation items

No.	Display Item	Content	RS-232C Command
1	VERSION (1)	The software version for each flash memory is displayed.	QS1
2	MAIN NG	The data on a shutdown generated in the Main side and its time are displayed.	QNG, CNG
3	TEMPERATURE	The current temperature and the rotation status of the fan are displayed.	QMT
4	HOUR METER	The HOUR METER/P-COUNT information are displayed.	–
5	HDMI SIGNAL INFO 1	The data on the Status Register of the HDMI Receiver are displayed in hexadecimal notation.	–
6	HDMI SIGNAL INFO 2		
7	VDEC SIGNAL INFO	Display the Signal Information on VDEC.	–

8.2.1 INFORMATION

8.2.1.1 VERSION (1)

The software versions for each microcomputer is displayed.



```
INFORMATION   VD1-30101-NTV-JWM7

VERSION(1)

  I/F         -12A
  MAIN        -02M       01A
  MULTI PRS   -02M       01A

  MODULE      -03A_M     01A
  SEQ PRS     -02Y       01A



                              P
```

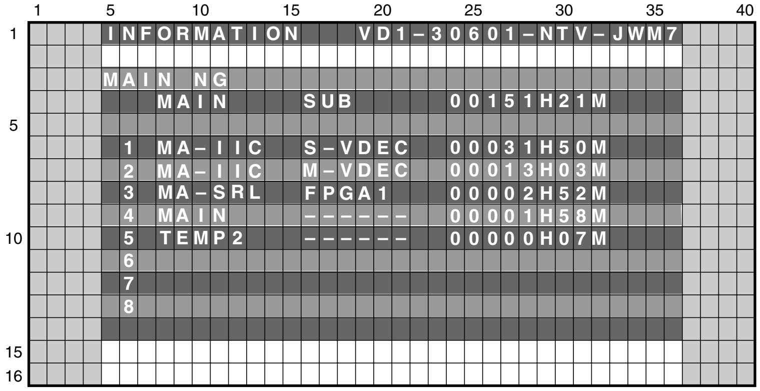
Screen: VERSION (1)

Microcomputer	On-Screen Display	Display Example (Execution program block)	Display Example (Boot block)
I/F microcomputer	I/F	-12A	–
Main microcomputer	MAIN	-02M	01A
Multiprocessor program	MULTI PRS	-02M	01A
Module microcomputer	MODULE	-03A_M	01A
Sequence processor program	SEQ PRS	-02Y	01A

Note: MULTI PRS stands for MULTI PROCESSOR and SEQ PRS stands for SEQUENCE PROCESSOR.
29 to 32 rows: Boot version of each device is displayed.
19 to 24 rows: The version of the execution program is displayed.

8.2.1.2 MAIN NG

SHUTDOWN information that is detected by the Main microcomputer is displayed.



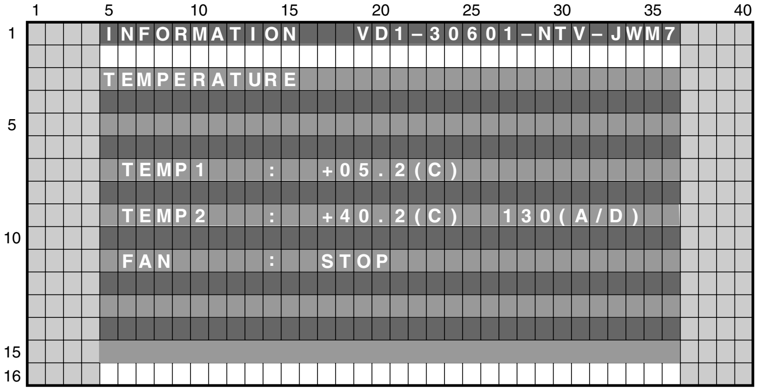
```
INFORMATION   VD1-30601-NTV-JWM7

MAIN NG
  MAIN      SUB      00151H21M

 1 MA-IIC   S-VDEC   00031H50M
 2 MA-IIC   M-VDEC   00013H03M
 3 MA-SRL   FPGA1    00002H52M
 4 MAIN     ------   00001H58M
 5 TEMP2    ------   00000H07M
 6
 7
 8
```

Screen: MAIN NG

OSD: MAIN	OSD: SUB	Cause of Shutdown
AUDIO	----	Speaker short-circuit
MODULE	----	Abnormality in Module microcomputer communication
MA-SRL		Abnormality in 3-wire Serial Communication of the Main microcomputer.
	IF	Communication failure of IF microcomputer
	MULTI1	Multiprocessor communication failure (MULIT1)
	IP	Multiprocessor I/P processor communication failure
	D-SEL	Digital selector communication failure
	SLAVE	Communication failure between master Multiprocessor and SLAVE Multiprocessor
	FPGA1	Communication failure between MAIN and FPGA
	FPGA2	Communication failure between Multiprocessor and FPGA
MA-IIC		Abnormality in Main microcomputer IIC communication
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	M-VDEC	Main VDEC
	S-VDEC	SUB VDEC
	ADC	AD/PLL
	HDMI	HDMI
	MA-EEP	64K EEPROM
	DVI	DVI receiver
	AUD-SW	Audio SW
	VOLUME	VOLUME IC
MAIN	----	Communication failure between IF and Main microcomputer & UNKNOWN
FAN	----	Fan stopped
TEMP2	----	High temperature of the unit.
POWER		Abnormality in the power
	M-DCDC	Abnormality in the ASIC power (DC-DC)

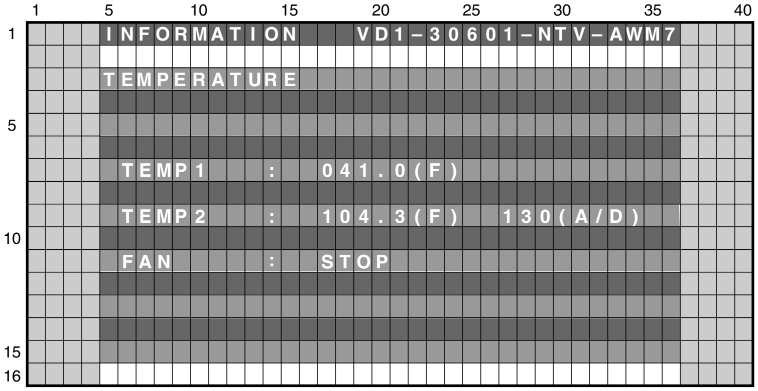
8.2.1.3 TEMPERATURE

The current temperature and fan rotation state are displayed.



```
INFORMATION   VD1-30601-NTV-JWM7

TEMPERATURE



  TEMP1    :   +05.2(C)

  TEMP2    :   +40.2(C)   130(A/D)

  FAN      :   STOP
```

Screen: TEMPERATURE (For Japan and Europe)



```
INFORMATION   VD1-30601-NTV-AWM7

TEMPERATURE



  TEMP1    :   041.0(F)

  TEMP2    :   104.3(F)   130(A/D)

  FAN      :   STOP
```

Screen: TEMPERATURE (For North America)

• Display

Temperature indications

TEMP1: The temperature of the sensor in the panel is indicated in Celsius (models for Japan and Europe) or in Fahrenheit (models for North America).

TEMP2: The A/D input value at Pin 76 (AN0) of the main microcomputer is converted to the temperature value and indicated in Celsius (models for Japan and Europe) or in Fahrenheit (models for North America). The 10-bit A/D value is also indicated. (**Note:** A shutdown process starts when the sensor temperature exceeds the specified maximum [C].)

Fan output indication

One of the following indications is displayed:

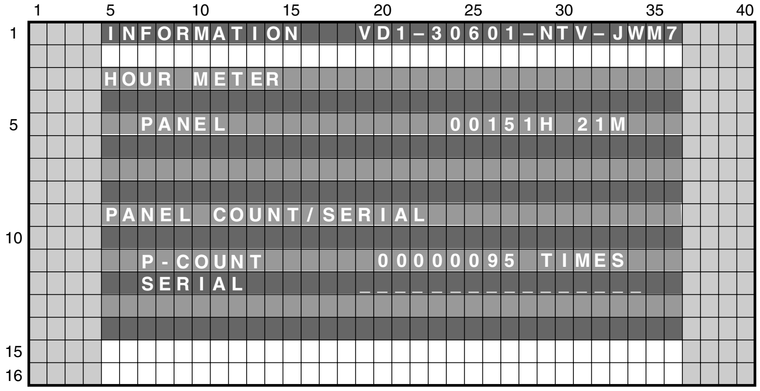
STOP : The fan stops.
LOW : The fan rotates at a low speed.
MIDDLE : The fan rotates at a medium speed.
HIGH : The fan rotates at a high speed.

Note: According to where and how the unit is installed, there may be a difference between the measured sensor temperature and the ambient temperature. Also, the quality of the sensor varies within tolerable limits from product to product. So use the sensor temperature only as a guide.

Note: Press the [⬆] and [⬇] keys to update the temperature because the sensor temperature is not automatically updated.

8.2.1.4 HOUR METER

HOUR METER and P-COUNT informations are displayed.



```
INFORMATION   VD1-30601-NTV-JWM7

HOUR METER

  PANEL                00151H 21M



PANEL COUNT/SERIAL

  P-COUNT         00000095 TIMES
  SERIAL      ________________
```

Screen: HOUR METER

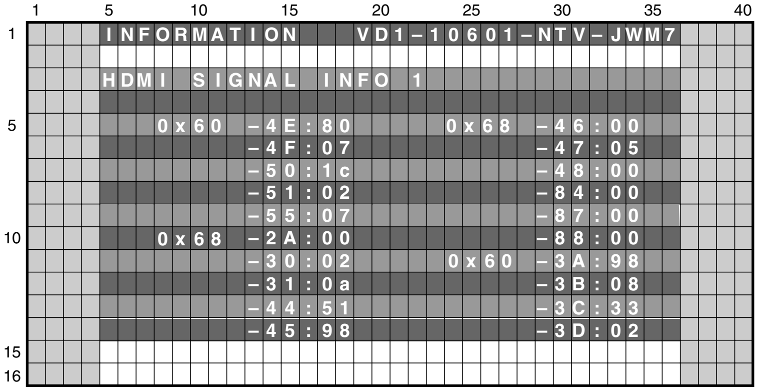
Meaning	On-screen Display	Display Example	RS-232C Command
HOUR METER (PANEL-side)	PANEL	00151H 21M	QIP
POWER ON COUNTER	P-COUNT	00000095 TIMES	QIP
SYSTEM SERIAL	SERIAL		QIP

Note 1: SERIAL (serial number of the system) is indicated only for FHD panels.

Note 2: The data on the Hour Meter and P-Count for the panel are obtained from the panel.

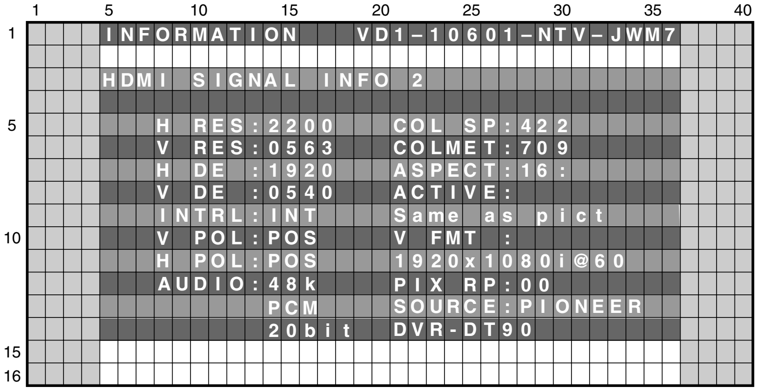
8.2.1.5 HDMI SIGNAL INFO 1

Signal information that was input to HDMI is displayed.



```
INFORMATION    VD1-10601-NTV-JWM7

HDMI SIGNAL INFO 1

   0x60 -4E:80       0x68 -46:00
        -4F:07            -47:05
        -50:1c            -48:00
        -51:02            -84:00
        -55:07            -87:00
   0x68 -2A:00            -88:00
        -30:02       0x60 -3A:98
        -31:0a            -3B:08
        -44:51            -3C:33
        -45:98            -3D:02
```

Screen: HDMI SIGNAL INFO 1



```
INFORMATION    VD1-10601-NTV-JWM7

HDMI SIGNAL INFO 2

   H RES:2200     COL SP:422
   V RES:0563     COLMET:709
   H DE :1920     ASPECT:16:
   V DE :0540     ACTIVE:
   INTRL:INT      Same as pict
   V POL:POS      V FMT :
   H POL:POS      1920x1080i@60
   AUDIO:48k      PIX RP:00
         PCM      SOURCE:PIONEER
         20bit    DVR-DT90
```

Screen: HDMI SIGNAL INFO 2

HDMI SIGNAL INFO 1

Device	SA	Content
0×60	4Eh	Status register
	4Fh	Signal distinction result 1
	50h	Signal distinction result 2
	51h	Flag detection output
	55h	Noise level detection 1
0×68	2Ah	Audio information: PCM/non PCM, existence of copyright protection, etc.
	30h	Audio information: Sampling frequency
	31h	Audio information: The number of quantization bit
	44h	Video information: Color space
	45h	Video information: Aspect ratio
	46h	Video information: Scaling
	47h	Video information: Video format
	48h	Video information: Pixel count
	84h	Audio information: Channel count
	87h	Audio information: Speaker allocation
	88h	Audio information: Downmix inhibit flag
0×60	3Ah	Video information: Valid horizontal pixel number (lower bit)
	3Bh	Video information: Valid horizontal pixel number (upper bit)
	3Ch	Video information: Valid vertical lines (lower bit)
	3Dh	Video information: Valid vertical lines (upper bit)

HDMI SIGNAL INFO 2

Display Item	Display Example
H RES	Horizontal pixel number (decimal numeral)
V RES	Vertical lines (decimal numeral)
H DE	Valid horizontal pixel number (decimal numeral)
V DE	Valid vertical lines (decimal numeral)
INTRL	Interlace or progressive
V POL	VSYNC polarity
H POL	HSYNC polarity
AUDIO (first line)	Sampling frequency
AUDIO (second line)	Audio format
AUDIO (third line)	Quantization bit
COL SP	Color space (AVI Info)
COLMET	Color metry (AVI Info)
ASPECT	Aspect ratio (AVI Info)
ACTIVE	Active format (AVI Info)
V FMT	Video format (AVI Info)
PIX RP	Pixel count
SOURCE (first line)	Vendor name of the emission device
SOURCE (second line)	Model name of the emission device

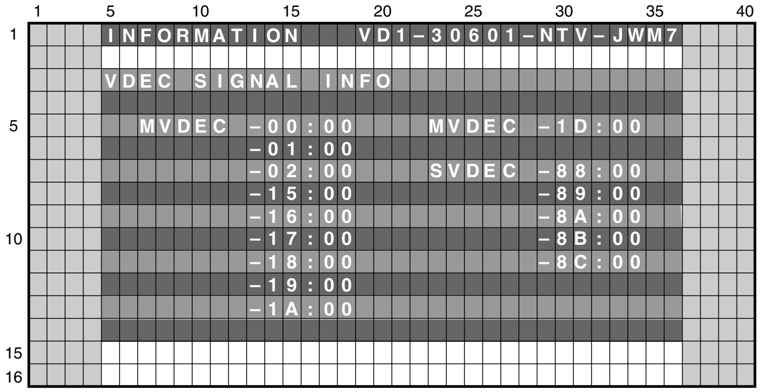
Correspondence of display and resolution of HDMI FACTORY

When the screen is not displayed, confirm the five following items.

Input Signal	Display of FACTORY				
	H RES	V RES	H DE	V DE	V FMT
480i (525i)	858	262 or 263	720	240	720x480i @ 60
480p (525p)	858	525	720	480	720x480p @60
1080i (1125i)	2200	562 or 563	1920	540	1920x1080i @ 60
720p (750p)	1650	750	1280	720	1280x720p @ 60

8.2.1.6 VDEC SIGNAL INFO

Signal state that is input to VDEC is displayed.



```
INFORMATION   VD1-30601-NTV-JWM7

VDEC SIGNAL INFO

  MVDEC  -00:00     MVDEC  -1D:00
         -01:00
         -02:00     SVDEC  -88:00
         -15:00            -89:00
         -16:00            -8A:00
         -17:00            -8B:00
         -18:00            -8C:00
         -19:00
         -1A:00
```

Screen: VDEC SIGNAL INFO

Device	SA	Content
MVDEC	00h	Signal distinction result 1
	01h	Signal distinction result 2
	02h	Flag detection output
	15h	Noise level detection 1
	16h	Noise level detection 2
	17h	Non-standard decision output
	18h	Subcarrier signal detection
	19h	ACC data output
	1Ah	ACC processing information output
	1Dh	Input mode setting
SVDEC	88h	Status register 1 (TV/VCR status)
	89h	Status register 2 (Macrovision detection, etc.)
	8Ah	Status register 3 (Front-end AGC gain value)
	8Bh	Status register 4 (Subcarrier to horizontal (SCH) phase)
	8Ch	Status register 5 (Signal distinction result)

8.2.2 PANEL FACTORY (+)

The factory menu section of the panel side is displayed.

● Operation items

No.	Display Item	Content	RS-232C Command
1	PANEL INFORMATION	The software version and backup status of the DIGITAL Assy are displayed.	QST
2	PANEL WORKS	The counts of the Pulse Meter and Hour Meter are indicated.	QIP
3	POWER DOWN	The power-down history is indicated.	QPD
4	SHUT DOWN	The shutdown history, as detected by the Module Microcomputer, is displayed.	QSD
5	PANEL-1 ADJ (+)	The SUS waveform and drive power can be adjusted.	–
6	PANEL-2 ADJ (+)	The panel white balance and ABL can be adjusted.	–
7	PANEL REVISE (+)	The panel degradation correction level can be set.	–
8	ETC (+)	Copying of backup data and clearance of various data can be done.	–
9	RASTER MASK SETUP (+)	The mask screen (PASTER) is displayed.	MKS
10	PATTEN MASK SETUP (+)	The mask screen (PATTERN) is displayed.	MKS
11	COMBI MASK SETUP (+)	The mask screen (COMBI) is displayed.	MKC

■ Panel Factory Function

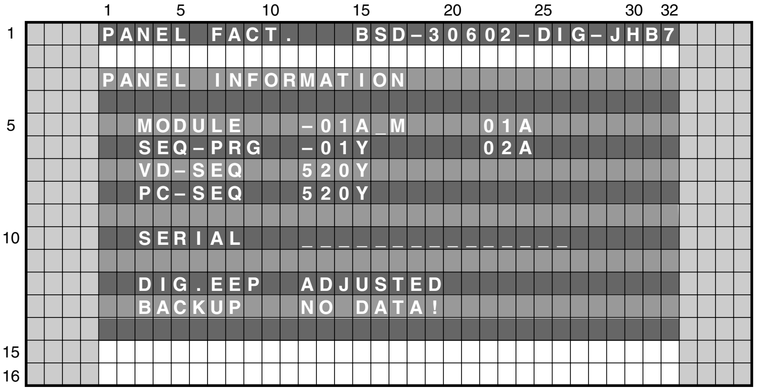
Displays the Factory menu, which enables adjustment of the panel via the screen display.

1. Character display area

- **Mask indication during Panel Factory mode**
  If the Mask indication is set during Panel Factory mode, the GUI indication is displayed for 1 second at one layer of the panel factory menu, followed by switching to the mask and drive sequence that have been set. For details on the communication format with the main microcomputer.

8.2.2.1 PANEL INFORMATION

- Data on the microcomputer version of the panel, product serial number, and the status of memory for adjustment data of the unit and for backup are sent back.



```
PANEL FACT.   BSD-30602-DIG-JHB7

PANEL INFORMATION

  MODULE   -01A_M    01A
  SEQ-PRG  -01Y      02A
  VD-SEQ   520Y
  PC-SEQ   520Y

  SERIAL   _______________

  DIG.EEP  ADJUSTED
  BACKUP   NO DATA!
```

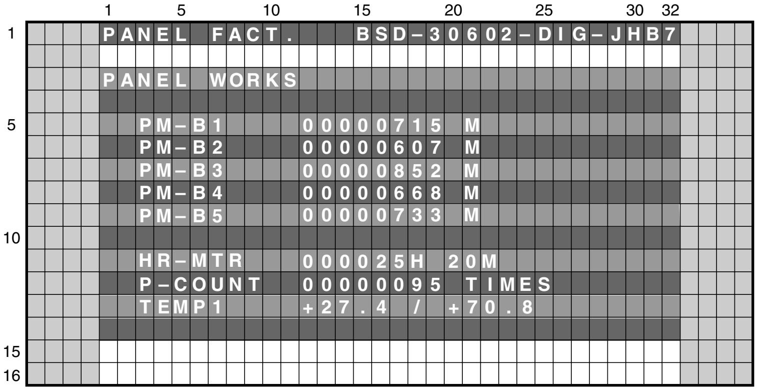
■ Key operation

<DOWN> : Shifting to PANEL WORKS
<UP> : Shifting to COMBI MASK SETUP (+)
<L/R> : Updating displayed information

No other layers are nested below this layer. There is no adjustment item.

8.2.2.2 PANEL WORKS

- Data on operations, such as the accumulated pulse-meter counts, hour-meter count, power-on count, and temperature detected by the sensor, are sent back. No other layers are nested below this layer.



```
PANEL FACT.   BSD-30602-DIG-JHB7

PANEL WORKS

  PM-B1    00000715 M
  PM-B2    00000607 M
  PM-B3    00000852 M
  PM-B4    00000668 M
  PM-B5    00000733 M

  HR-MTR   000025H 20M
  P-COUNT  00000095 TIMES
  TEMP1    +27.4 / +70.8
```

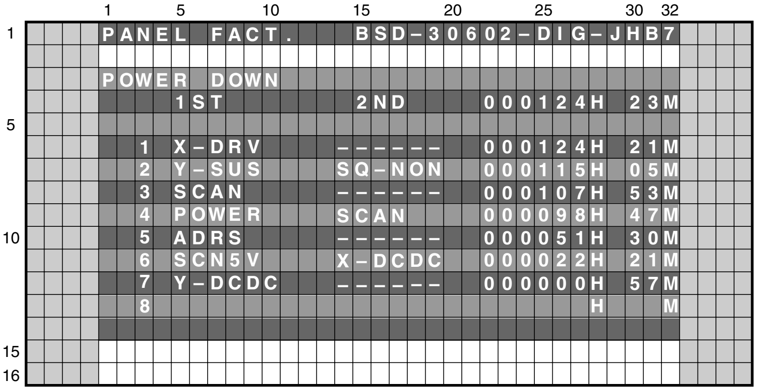
■ Key operation

<DOWN> : Shifting to POWER DOWN
<UP> : Shifting to PANEL INFORMATION
<L/R> : Updating displayed information

- No other layers are nested below this layer. There is no adjustment item.
- PM-B1 to B5: Pulse-meter counts for the 5 blocks on the screen.
- TEMP1: The current panel temperature and the historical maximum temperature recorded in memory are indicated. The range of temperature indication is from -50.0 to +99.9.

8.2.2.3 POWER-DOWN

- The power-down history is sent back.
  Up to 8 log items with the accumulated power-on time upon generation were also indicated.



```
PANEL FACT.   BSD-30602-DIG-JHB7

POWER DOWN
    1ST       2ND   000124H 23M

  1 X-DRV     ------ 000124H 21M
  2 Y-SUS     SQ-NON 000115H 05M
  3 SCAN      ------ 000107H 53M
  4 POWER     SCAN   000098H 47M
  5 ADRS      ------ 000051H 30M
  6 SCN5V     X-DCDC 000022H 21M
  7 Y-DCDC    ------ 000000H 57M
  8                        H   M
```

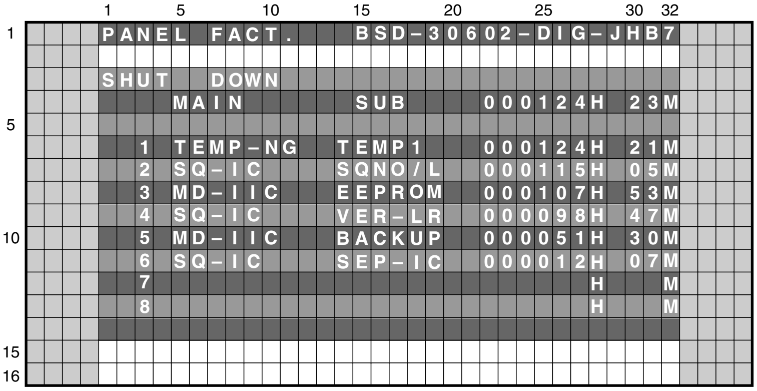
■ Key operation

<DOWN>	: Shifting to SHUT DOWN
<UP>	: Shifting to PANEL WORKS
<L/R>	: Updating displayed information

- No other layers are nested below this layer. There is no adjustment item.
- When a power-down is generated, the power-down point is indicated in the column labeled 1ST and the most likely next power-down point is indicated in the column labeled 2ND.
- A log for the same power-down point or with the same accumulated power-on time upon generation is not recorded.

8.2.2.4 SHUT DOWN

- The history of shutdowns generated in the FHD DIGITAL Assy is displayed.
  Up to 8 log items with the accumulated power-on time upon generation were also indicated.



```
PANEL FACT.   BSD-30602-DIG-JHB7

SHUT  DOWN
    MAIN      SUB   000124H 23M

  1 TEMP-NG   TEMP1  000124H 21M
  2 SQ-IC     SQNO/L 000115H 05M
  3 MD-IIC    EEPROM 000107H 53M
  4 SQ-IC     VER-LR 000098H 47M
  5 MD-IIC    BACKUP 000051H 30M
  6 SQ-IC     SEP-IC 000012H 07M
  7                        H   M
  8                        H   M
```

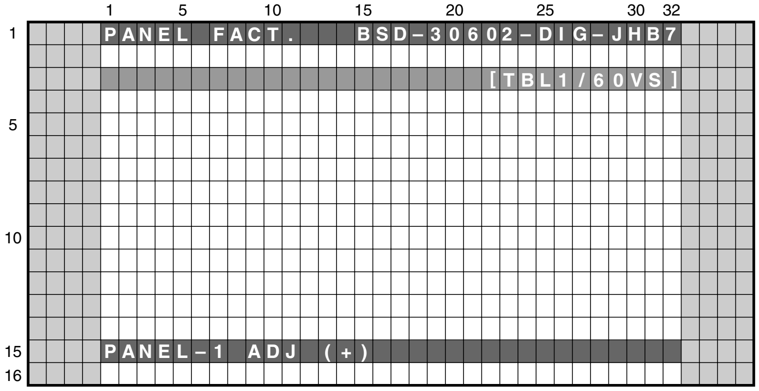
■ Key operation

<DOWN>	: Shifting to PANEL-1 ADJ (+)
<UP>	: Shifting to POWER DOWN
<L/R>	: Updating displayed information

- No other layers are nested below this layer. There is no adjustment item.
- When a shutdown is generated, if data on defective places are available, they are indicated in the column labeled SUB.

8.2.2.5 PANEL-1 ADJ (+)

- Timing and voltage for the driving pulse are set. At the upper right of the screen, the wb table and frequency table indicating operation status are displayed, and at the lower left of the screen, the item for the upper nested layer (PANEL-1 ADJ [+]) is displayed. Pressing the SET key shifts the screen to the next nested layer below for item selection.

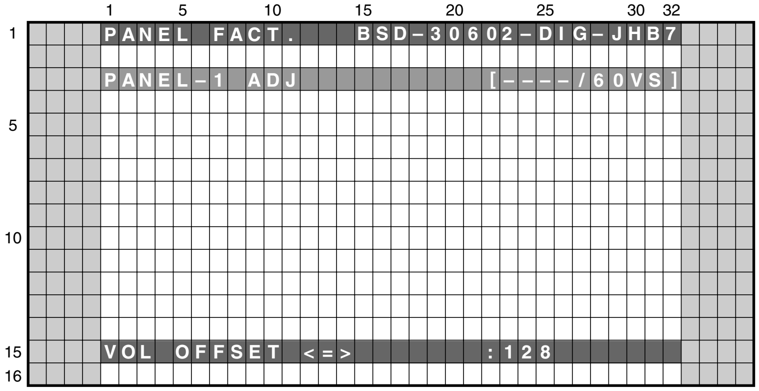


```
PANEL FACT.    BSD-30602-DIG-JHB7

                      [TBL1/60VS]

PANEL-1 ADJ (+)
```

■ Key operation

<DOWN> : Shifting to PANEL-2 ADJ (+)
<UP> : Shifting to SHUT DOWN
<SET> : Shifting to the next nested layer

When the screen is shifted to the next nested layer below, a subitem is indicated on the 3rd line, and detailed data are indicated on the 15th line.



```
PANEL FACT.    BSD-30602-DIG-JHB7

PANEL-1 ADJ           [----/60VS]

VOL OFFSET <=>        :128
```

■ Key operation

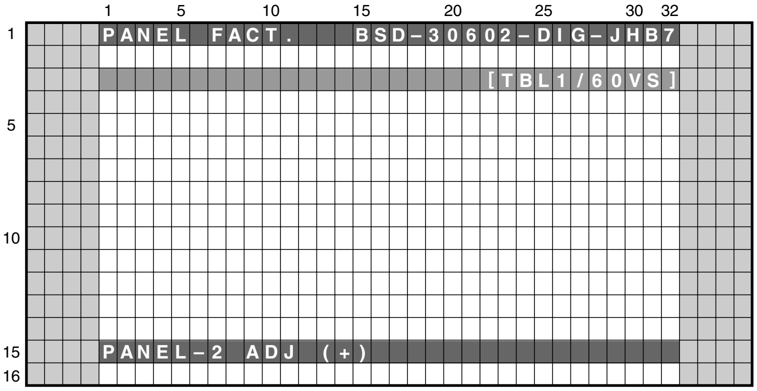
<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the adjustment value and shifting to the upper layer

- When the screen is shifted to the next nested layer below, a subitem is indicated on the 3rd line, and detailed data are indicated on the 15th line.
- When the screen is shifted to this layer while the RASTER MASK is selected, the Panel W/B setting is temporarily set to default.

<Lower-layer items of PANEL-1 ADJ>

No.	Items	Adjustment/Setting Value	RS-232C Command
1	X-SUS B <=>	120 to 136	XSB
2	Y-SUS B <=>	120 to 136	YSB
3	Y-SUSTAIL T1 <=>	120 to 136	YTG
4	Y-SUSTAIL T2 <=>	120 to 136	YTB
5	Y-SUSTAIL W <=>	120 to 136	YTW
6	XY-RST W1 <=>	120 to 136	RSW
7	XY-RST W2 <=>	120 to 136	RYW
8	VOL SUS <=>	000 to 255	VSU
9	VOL OFFSET <=>	000 to 255	VOF
10	VOL RST P <=>	000 to 255	VRP
11	SUS FREQ. <=>	MODE1 to MODE8	SFR

8.2.2.6 PANEL-2 ADJ (+)



PANEL FACT. BSD-30602-DIG-JHB7

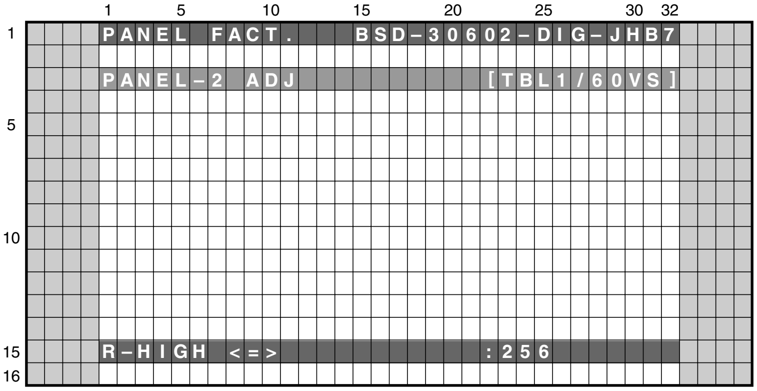
[TBL1/60VS]

PANEL-2 ADJ (+)

RGB gain adjustment can be performed. Pressing the SET key shifts the screen to the next nested layer below for item selection.

■ Key operation

<DOWN> : Shifting to PANEL REVISE
<UP> : Shifting to PANEL-1 ADJ (+)
<SET> : Shifting to the next nested layer



PANEL FACT. BSD-30602-DIG-JHB7

PANEL-2 ADJ [TBL1/60VS]

R-HIGH <=> :256

The ABL/WB adjustment values are divided into 4 tables for each drive sequence. The table No. and adjustment value of the current drive sequence are indicated at right on the 3rd line on the screen.

■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the adjustment value and shifting to the upper layer

Sequence and Adjustment value

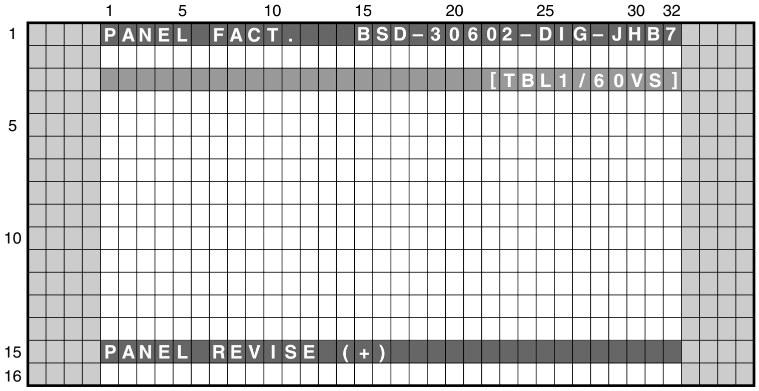
Sequence	Video 50 Hz	Video 60 Hz	Video 72 Hz	Video 75 Hz	PC 70 Hz
Adjustment value table	TBL 2	TBL 1	TBL 1	TBL 3	TBL 4

<Lower-layer items of PANEL-2 ADJ>

No.	Items	Adjustment/Setting Value	RS-232C Command
1	R-HIGH <=>	000 to 511	PRH
2	G-HIGH <=>	000 to 511	PGH
3	B-HIGH <=>	000 to 511	PBH
4	R-LOW <=>	000 to 999	PRL
5	G-LOW <=>	000 to 999	PGL
6	B-LOW <=>	000 to 999	PBL
7	ABL <=>	000 to 255	ABL

8.2.2.7 PANEL REVISE (+)

- The degradation compensation level for white balance can be set.



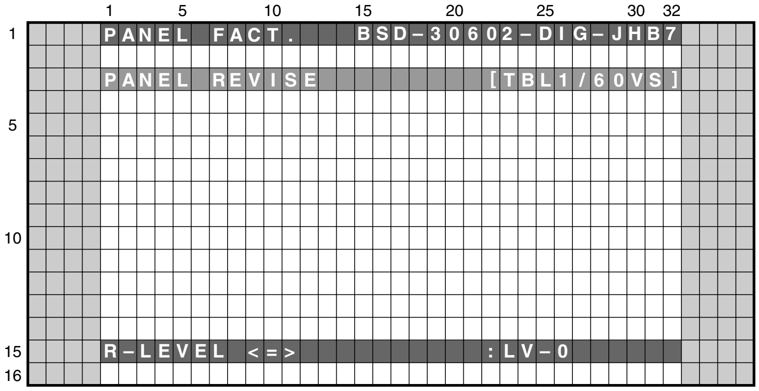
PANEL FACT. BSD-30602-DIG-JHB7

[TBL1/60VS]

PANEL REVISE (+)

■ Key operation

<DOWN> : Shifting to ETC.(+)
<UP> : Shifting to PANEL-2 ADJ (+)
<SET> : Shifting to the next nested layer



PANEL FACT. BSD-30602-DIG-JHB7

PANEL REVISE [TBL1/60VS]

R-LEVEL <=> :LV-0

■ Key operation

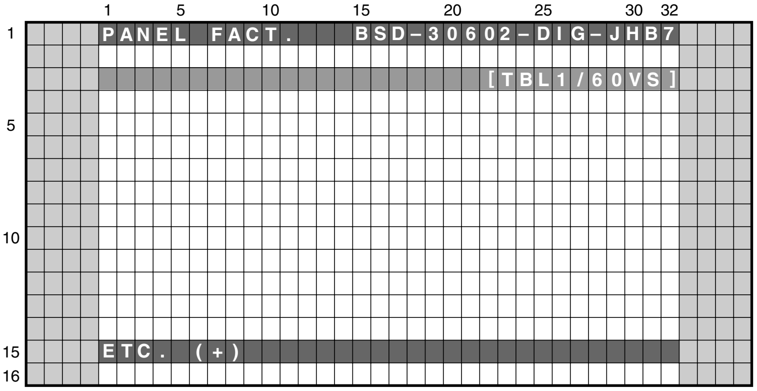
<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<SET> : Determining the setting value and shifting to the upper layer

< Lower-layer items of PANEL REVISE (+) >

No.	Items	Adjustment/Setting Value	RS-232C Command
1	R-LEVEL <=>	LV-0 to LV-7	RRL
2	G-LEVEL <=>	LV-0 to LV-7	RGL
3	B-LEVEL <=>	LV-0 to LV-7	RBL

8.2.2.8 ETC. (+)

- Settings concerning backup of adjustment values and clearance of the histories can be made.

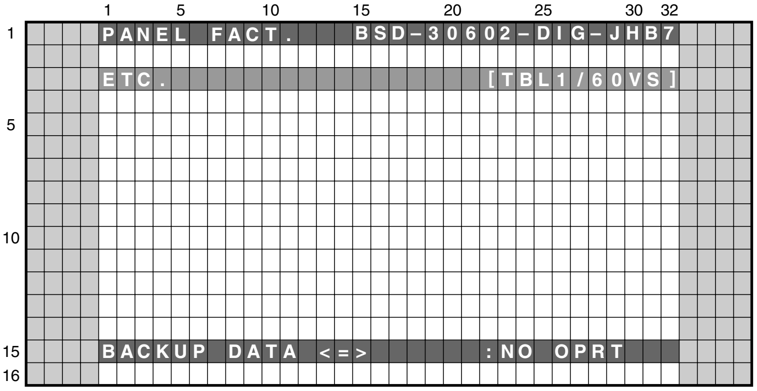

PANEL FACT. BSD-30602-DIG-JHB7

[TBL1/60VS]

ETC. (+)

■ Key operation

<DOWN> : Shifting to RASTER MASK SETUP (+)
<UP> : Shifting to PANEL REVISE (+)
<SET> : Shifting to the next nested layer


PANEL FACT. BSD-30602-DIG-JHB7

ETC. [TBL1/60VS]

BACKUP DATA <=> :NO OPRT

■ Key operation

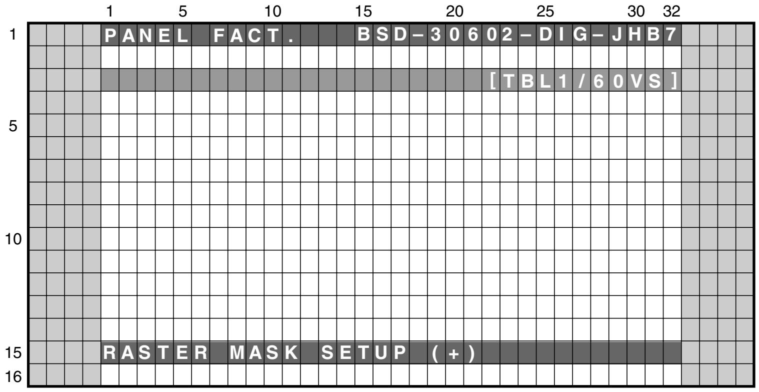
<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<SET> : Determining the setting value and shifting to the upper layer

<Lower-layer items of ETC.>

No.	Items	Adjustment/Setting Value	RS-232C Command
1	BACKUP DATA <=>	NO OPRT <=> TRANSFER or ERR	BCP
2	DIGITAL EEPROM <=>	NO OPRT <=> DELETE/REPAIR	FAJ/UAJ
3	PD INFO. <=>	NO OPRT <=> CLEAR	CPD
4	SD INFO. <=>	NO OPRT <=> CLEAR	CSD
5	HR-MTR INFO. <=>	NO OPRT <=> CLEAR	CHM
6	PM/B1-B5 <=>	NO OPRT <=> CLEAR	CPM
7	P-COUNT INFO. <=>	NO OPRT <=> CLEAR	CPC
8	MAX TEMP. <=>	NO OPRT <=> CLEAR	CMT

8.2.2.9 RASTER MASK SETUP (+)

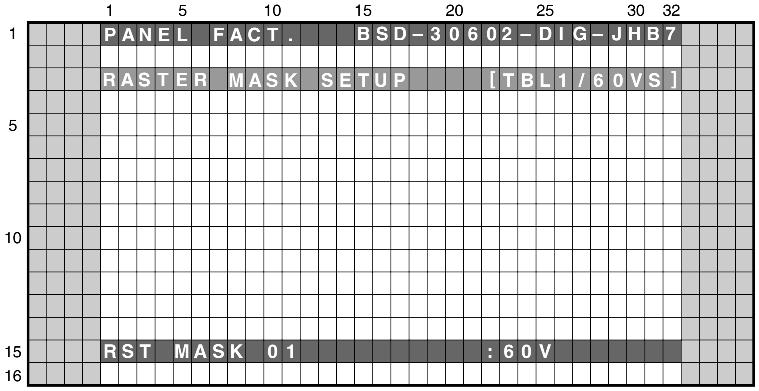
- Setting of RASTER MASK and setting of drive sequence during Raster Mask mode can be made.



```
PANEL FACT.     BSD-30602-DIG-JHB7
                       [TBL1/60VS]
RASTER MASK SETUP (+)
```

■ Key operation

<DOWN> : Shifting to PATTEN MASK SETUP
<UP> : Shifting to ETC. (+)
<SET> : Shifting to the next nested layer



```
PANEL FACT.     BSD-30602-DIG-JHB7
RASTER MASK SETUP      [TBL1/60VS]
RST MASK 01            :60V
```

■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the setting value and shifting to the upper layer

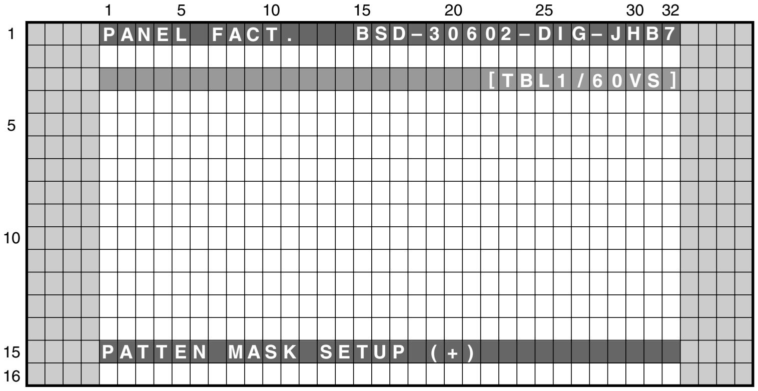
<Lower-layer items of RASTER MASK SETUP>

No.	Items	Adjustment/Setting Value	RS-232C Command
1	MASK OFF	<=> 48V <=> 50V <=> 60V <=> 60P <=> 70P <=> 72V <=> 75V <=> (Each sequence can be selected.)	MKS+S00
2	PTN MASK 01 <=>		MKS+S51
3	• • •		• • •
4	PTN MASK 24 <=>		MKS+S74

- The MASK indication sequence can be changed among 48V, 50V, 60V, 72V, 75V, 60P, and 70P, using the Right or Left key. The selected sequence and the ABL/WB table are retained until the mask is turned off.
- 48V and 60P are represented by 50V and 60V, respectively. The ABL/WB table is changed to the PC table.

8.2.2.10 PATTEN MASK SETUP (+)

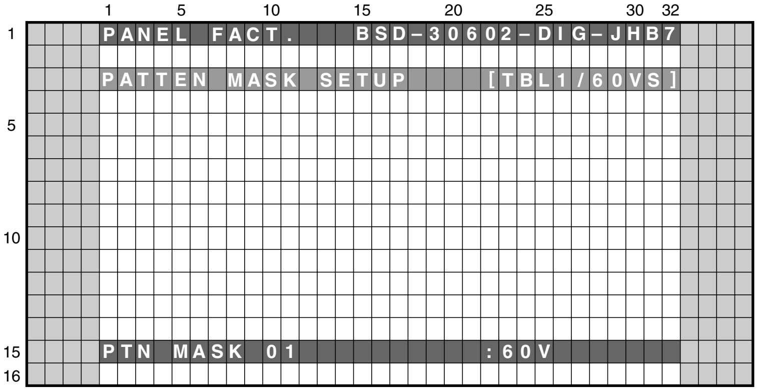
- Setting of PATTERN MASK and setting of drive sequence during Pattern Mask mode can be made.



```
PANEL FACT.      BSD-30602-DIG-JHB7

                        [TBL1/60VS]

PATTEN MASK SETUP (+)
```

■ Key operation

<DOWN> : Shifting to COMBI MASK (+)
<UP> : Shifting to RASTER MASK SETUP (+)
<SET> : Shifting to the next nested layer



```
PANEL FACT.      BSD-30602-DIG-JHB7

PATTEN MASK SETUP       [TBL1/60VS]

PTN MASK 01             :60V
```

■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the setting value and shifting to the upper layer

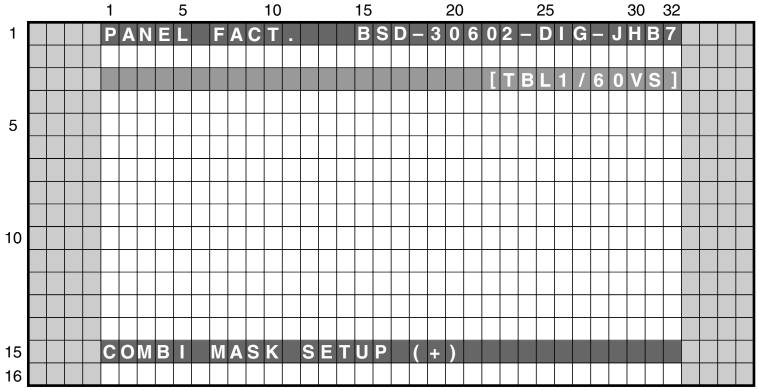
<Lower-layer items of PATTERN MASK SETUP (+) >

No.	Items	Adjustment/Setting Value	RS-232C Command
1	MASK OFF	<=> 48V <=> 50V <=> 60V <=> 60P <=> 70P <=> 72V <=> 75V <=> (Each sequence can be selected.)	MKS+S00
2	RST MASK 01 <=>		MKS+S01
3	• • •		• • •
4	RST MASK 39 <=>		MKS+S39

- The MASK indication sequence can be changed among 48V, 50V, 60V, 72V, 75V, 60P, and 70P, using the Right or Left key. The selected sequence and the ABL/WB table are retained until the mask is turned off.
- 48V and 60P are represented by 50V and 60V, respectively. The ABL/WB table is changed to the PC table.

8.2.2.11 COMBI MASK SETUP (+)

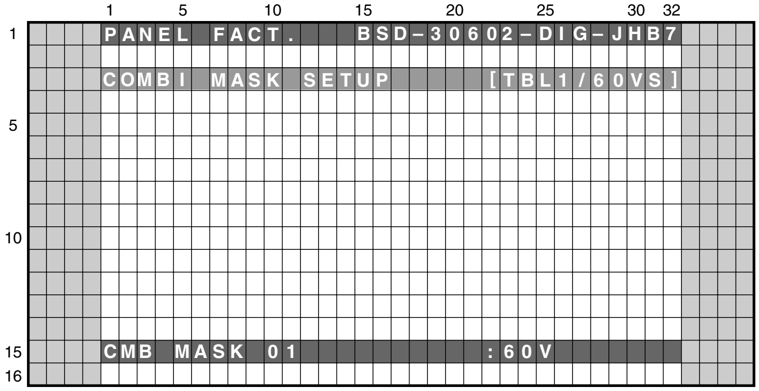
- Setting of COMBI MASK and setting of drive sequence during Combi Mask mode can be made.



```
PANEL FACT.    BSD-30602-DIG-JHB7
                      [TBL1/60VS]
COMBI MASK SETUP (+)
```

■ Key operation

<DOWN> : Shifting to PANEL INFORMATION (+)
<UP> : Shifting to RASTER MASK SETUP (+)
<SET> : Shifting to the next nested layer



```
PANEL FACT.    BSD-30602-DIG-JHB7
COMBI MASK SETUP      [TBL1/60VS]
CMB MASK 01           :60V
```

■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the setting value and shifting to the upper layer

<Lower-layer items of COMBI MASK SETUP (+) >

No.	Items	Adjustment/Setting Value	RS-232C Command
1	MASK OFF	<=> 48V <=> 50V <=> 60V <=> 60P <=> 70P <=> 72V <=> 75V <=> (Each sequence can be selected.)	MKC+S00
2	CMB MASK 01 <=>		MKC+S01
3	• • •		• • •
4	CMB MASK 10 <=>		MKC+S10

- The MASK indication sequence can be changed among 48V, 50V, 60V, 72V, 75V, 60P, and 70P, using the Right or Left key. The selected sequence and the ABL/WB table are retained until the mask is turned off.
- 48V and 60P are represented by 50V and 60V, respectively. The ABL/WB table is changed to the PC table.

8.2.3 INITIALIZE

● Operation items

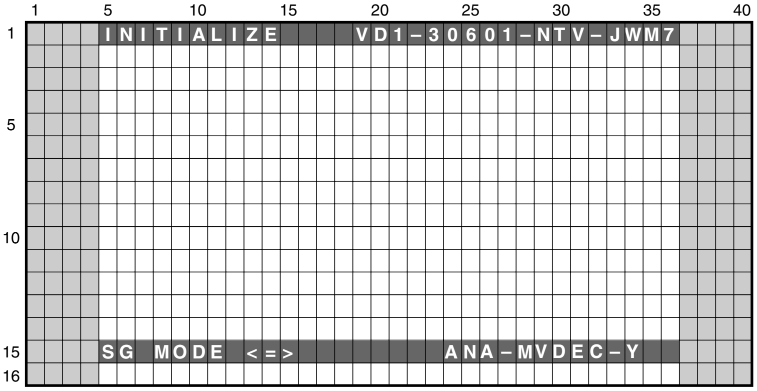
No.	Function/Display	Content	RS-232C Command
1	SYNC DET (+)	Only for the technical use.	–
2	SG MODE <=>	Paired SG_MODE with SG_PATTERN. Set SG Route.	–
3	SG PATTERN <=>	Paired SG_PATTERN with SG_MODE. Set SG Pattern.	–
4	SIDE MASK LEVEL	Color setup of side mask.	BSL GSL RSL
5	FINAL SETUP (+)	Initialize flash memories on virgin product status	FST
6	HDMI INTR POSITION (+)	Only for the technical use.	–

8.2.3.1 SYNC DET (+)

- As this is an item for technical engineers, no information on servicing is available.

8.2.3.2 SG MODE

SG MODE (selection of the SG routes) and SG PATTERN (selection of signal patterns) are used in combination. The SG route must be first selected in SG MODE. Then the SG pattern of a signal that is to be transmitted to the selected route must be selected.



INITIALIZE VD1–30601–NTV–JWM7

SG MODE <=> ANA–MVDEC–Y

Screen: SG MODE

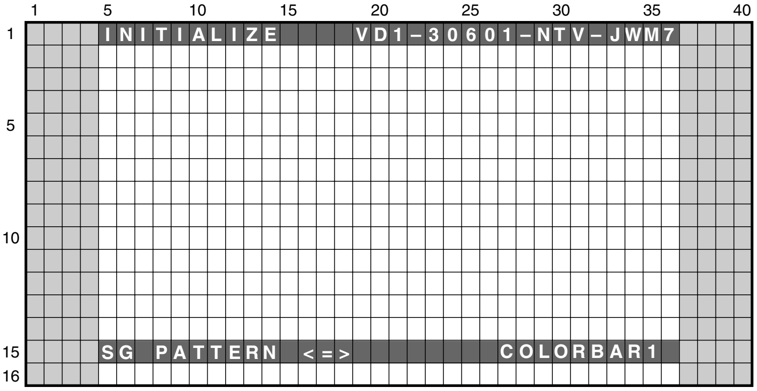
No.	Function/Display	Content
1	SG OFF	SG is set to OFF
2	ANA AD RGB	AD: RGB
3	ANA AD YCBCR	AD: Ycbcr
4	ANA SVDEC Y	SUB VDEC: Y (Analog output mode: SG VDEC feedback setting) *
5	ANA MVDEC Y	MAIN VDEC: Y (Analog output mode: SG VDEC feedback setting)
6	DIG MVDEC YCBCR	MAIN VDEC: YCbCr (color difference digital output mode)

Note *: The screen shifts to split-screen display, with the SG MODE screen displayed on the right (sublevel).
Check on the block diagram for the SG generation point and signal routes.

■ Important notice of the SG MODE and SG PATTERN

- When the unit is in SG MODE, do NOT input signals to INPUTs 4-6.
- The setting of the Y/C separation function should be set to the NTSC during the VDEC SG mode.
- Only the component and RGB signals can be output during SG mode, so only the Y signal is input at the CVBS signal mode, thus the picture is composed in black and white color. This isn't a failure.
- ANA AD RGB (the route for inputting the 525i RGB signal to AD) in SG MODE is a setting for a nonexistent route for the unit. Therefore, there is no setting value at the stages after the MVDEC. For this reason, there may be discoloration of the color bars or slow change of the luminance after SG MODE is set to ANA AD RGB, but it is not a failure.

8.2.3.3 SG PATTERN



INITIALIZE VD1–30601–NTV–JWM7

SG PATTERN <=> COLORBAR1

Screen: SG PATTERN

No.	Function/Display	SG Pattern (Brightness IRE Level/Color)	No.	Function/Display	SG Pattern (Brightness IRE Level/Color)
1	COLOR BAR1	Colorbar (75%)	11	RASTER4	Raster (75% Green)
2	COLOR BAR2	Colorbar (100%)	12	RASTER5	Raster (75% Magenta)
3	RAMP1	Ramp (100% white)	13	RASTER6	Raster (75% Red)
4	RAMP2	Ramp (100% Yellow)	14	RASTER7	Raster (75% Blue)
5	RAMP3	Ramp (75% Green)	15	RASTER8	Raster (– % Black)
6	RAMP4	Ramp (75% Red)	16	10STEP1	10STEP (100% white)
7	RAMP5	Ramp (75% Blue)	17	10STEP2	10STEP (100% Yellow)
8	RASTER1	Raster (100% White)	18	10STEP3	10STEP (75% Green)
9	RASTER2	Raster (75% Yellow)	19	10STEP4	10STEP (75% Red)
10	RASTER3	Raster (75% Cyanide)	20	10STEP5	10STEP (75% Blue)

■ Important notice of the SG MODE and SG PATTERN

- When the unit is in SG MODE, do NOT input signals to INPUTs 4-6.
- The setting of the Y/C separation function should be set to the NTSC during the VDEC SG mode.
- Only the component and RGB signals can be output during SG mode, so only the Y signal is input at the CVBS signal mode, thus the picture is composed in black and white color. This isn't a failure.
- ANA AD RGB (the route for inputting the 525i RGB signal to AD) in SG MODE is a setting for a nonexistent route for the unit. Therefore, there is no setting value at the stages after the MVDEC. For this reason, there may be discoloration of the color bars or slow change of the luminance after SG MODE is set to ANA AD RGB, but it is not a failure.

8.2.3.4 SIDE MASK LEVEL (+)

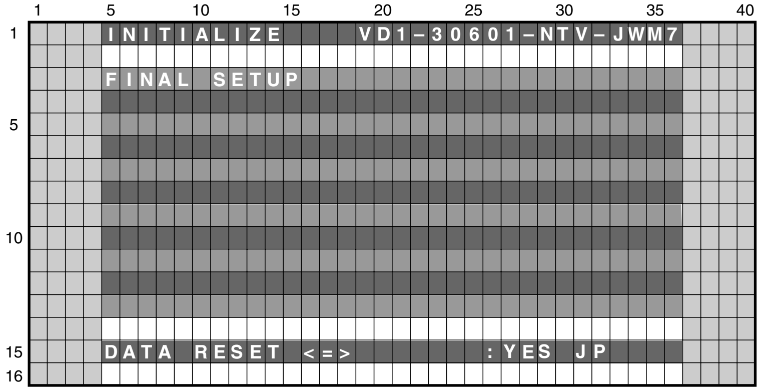
- Not available.
- Changing of the SIDE MASK LEVEL is possible in Integrator mode.

8.2.3.5 FINAL SETUP (+)

Various memory data are reset to factory-preset values. Data on destination are also written in.
As factory-preset values are different according to the destination, select an appropriate setting:

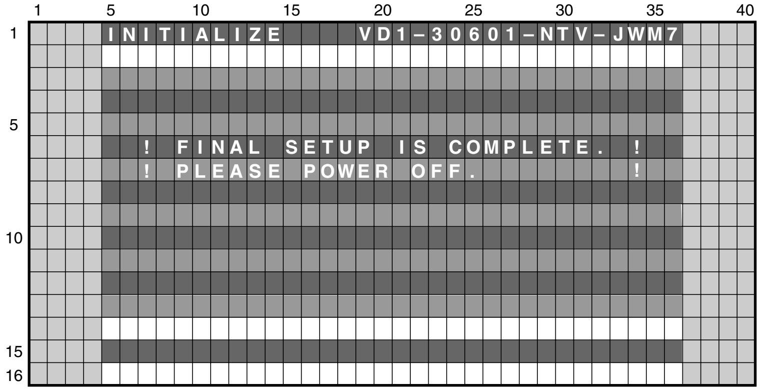
Kind of (YES∗∗)
YES JP : For Japan
YES US : For North America
YES EU : For Europe and others

To reset various memory data to factory-preset values, hold the SET key pressed for about 5 seconds while an appropriate destination (YES **) is selected.



```
INITIALIZE    VD1-30601-NTV-JWM7

FINAL SETUP

DATA RESET <=>        :YES JP
```

Screen: FINAL SETUP



```
INITIALIZE    VD1-30601-NTV-JWM7

  ! FINAL SETUP IS COMPLETE.  !
  ! PLEASE POWER OFF.         !
```

Screen: Message when FINAL SETUP is completed.

IMPORTANT!
After the FINAL SETUP is finished, be sure to proceed to the following steps, in order to turn the Orbiter function and Mask Control function on.

1. Enter Standby mode.
2. Press the HOME MENU key, then within 3 seconds press the Standby key to enter Integrator mode. Or turn the unit on then press the Integrator key on the remote control unit for servicing.
3. Move to ORBITER MODE, using the Up or Down key, then select ON, using the Right or Left key.
4. Move to MASK CONTROL, using the Up or Down key, then select ON, using the Right or Left key.

8.2.3.6 HDMI INTR POSITION (+)

- As this is an item for technical engineers, no information on servicing is available.

9. LIST OF RS-232C COMMANDS

9.1 RS-232C COMMANDS OUTLINE

9.1.1 DESCRIPTION OF RS-232C COMMANDS

With the PDP-5000EX/PRO-FHD1, the serial port is commonly used by the RS-232C and SR+ connectors. Although the setting upon shipment is RS-232C, it can be changed to SR+, using the Home menu. If SR+ is selected, to use the RS-232C commands during servicing to control the unit the setting must be returned to RS-232C.

•How to switch between SR+ and RS-232C

There are two ways to switch: (1) by using the remote control unit during Standby mode, and (2) by using the Home menu.

(1) Switching by using the remote control unit during Standby mode

- **From SR+ to RS-232C**
  With the unit in normal Standby mode, press a key other than the Standby key. Then within 10 seconds, hold the Volume + (or -) key pressed for 3 to 10 seconds.
  Then hold the sprit key pressed for 3 to 10 seconds. Then within 3 seconds, press the Enter key.
  The Standby LED flashes twice.
  Then the setting is switched to RS-232C, and the baud rate becomes 9600 bps.

- **From RS-232C to SR+**
  With the unit in normal Standby mode, press a key other than the Standby key. Then within 10 seconds, hold the Volume + (or -) key pressed for 3 to 10 seconds.
  Then hold the sprit key pressed for 3 to 10 seconds. Then within 3 seconds, press the HOME MENU key.
  The Standby LED flashes twice.
  Then the setting is switched to SR+.

(2) Switching by using the Home menu

- **From SR+ to RS-232C**
  Press the HOME MENU key. Move the cursor to Initial Setting, using the Up or Down key, then press the Enter key.
  Move the cursor to SR+, by the Up or Down key. Move the cursor to "Off," using the Left or Right key.
  Press the HOME MENU key to exit the Home menu.
  Then the setting is switched to RS-232C, and the baud rate becomes 9600 bps.

- **From RS-232C to SR+**
  Press the HOME MENU key. Move the cursor to Initial Setting, by using the Up or Down key, and press the Enter key.
  Move the cursor to SR+, by using the Up or Down key. Move the cursor to "On," by using the Left or Right key.
  Press the HOME MENU key to exit from the Home menu.
  Then the setting is switched to SR+.

•About RS-232C commands during Standby mode

During Standby mode (while the power to the main microcomputer is off), RS-232C commands (excluding some, such as PON) are not valid. If you wish to send invalid commands, such as DRV, during Standby mode, proceed in the following way:

During Standby
↓
ZACS00 (Although this is a command for aging, it is used for starting up the main microcomputer, in this case.)
↓ (Within 10 seconds)
DRVS00 (To turn the drive off)
↓ (Within 10 seconds)
PON

9.1.2 COMMAND PROTOCOL

● Command format

■Communication protocol : Asynchronous serial communication by RS-232C

Start bit length	: 1 bit
Data width	: 8 bit (ASCII code/ no distinction between upper case and lower case)
Parity	: None
Stop bit length	: 1 bit
Baud rate	: 9600 bps

■Adjustment function

Direct effectivity of numbers : When a number is transmitted after a command, an adjustment value can be directly set.

■Data format

The format of the control signal transmitted from the user side controller is as described below.
STX (02Hex) is arranged at the time of communication start and ETX (03Hex) is arranged at the time of data transmission complete, and ID, command and parameter are arranged in between. Data consists of ASCII type alphanumeric characters, and there is no distinction between the upper case and the lower case.

■In the case of command only
[single function command]

STX	ID	Command	ETX
0x02	**	□□□	0x03

■When setting/adjustment data is accompanied
[setting/adjustment command]

STX	ID	Command	Parameter	ETX
0x02	**	□□□	△△△	0x03

■Command processing

Command processing starts as soon as the command is entered.
ID shall be the two asterisks, "**".

■Confirmation of reception

The main microcomputer will make judgment to the command received, and if the command is judged to be an effective one, processing will be executed. When the system is in the standby status for the next command after completion of the processing, a reply to the received command is sent out. The data to be responded is a data in the upper case after deleting the ID code from the received command.

■When setting/adjustment data is accompanied

Data transmitted by PC

STX	ID	Command	Parameter	ETX
0x02	**	□□□	△△△	0x03

→

Reply data

STX	Command	Parameter	ETX
0x02	□□□	△△△	0x03

■In the case of command only

Data transmitted by PC

STX	ID	Command	ETX
0x02	**	□□□	0x03

→

Reply data

STX	Command	ETX
0x02	□□□	0x03

When responding, ERR is sent back if the command is unknown, and XXX is sent back if the command itself is valid but it cannot be processed because of its status.

■In the case of invalid command

Data transmitted by PC

STX	ID	Command	ETX
0x02	**	□□□	0x03

→

Reply data

STX	Command	ETX
0x02	ERR	0x03

■In the case of a command not executable due to its status

Data transmitted by PC

STX	ID	Command	ETX
0x02	**	□□□	0x03

→

Reply data

STX	Command	ETX
0x02	XXX	0x03

■Processing in the case of an error

If a communication error occurs between STX and ETX, processing of that command is stopped, and the reception buffer is cleared.
In the command reception process, the character string transmitted after the receipt of STX are continued to be stored in the register, and by receipt of ETX, the character string sandwiched between STX and ETX is recognized as a command. If the prepared character string storage buffer (24 bytes including STX, ID and ETX) is exceeded, a reply will not be sent out.

9.1.3 DEFINITION OF COMMAND

● Definition of command

■Single function command

It is a command that a command alone will complete an operation, and the command section consists of three characters.

Data transmitted by main

STX	ID	Command	ETX
0x02	**	PON	0x03

→

Reply data

STX	Command	ETX
0x02	PON	0x03

■Adjustment command and adjustment value

It is a command, accompanied by an adjustment value, to change the parameter value, and the command section is also three characters as in the case of a single function command. The adjustment value is a three character decimal numerical data within the range of 000-999. Incidentally, the adjustable range will be different depending on the function to be adjusted. (Be careful as it is not always up to 999.)

Data transmitted by main

STX	ID	Command	Parameter	ETX
0x02	**	CNT	128	0x03

→

Reply data

STX	Command	Parameter	ETX
0x02	CNT	128	0x03

* XXX will be transmitted if the received command is exceeding the adjustable range of the adjustment value.
* When the same setting value is transmitted consecutively for two times or more, the setting is overwritten without responding with XXX even though the command is invalid, and an ACK after deleting the ID is sent back.

■Setting command and setting value

It is a command, accompanied by a setting value, to change the setting value of the parameter, and the command section consists of three characters. The setting value consists of three characters, and the first character is fixed to S and the remaining two characters are decimal numbers within the range of S00-S99.

Data transmitted by main

STX	ID	Command	Parameter	ETX
0x02	**	MKS	S02	0x03

→

Reply data

STX	Command	Parameter	ETX
0x02	MKS	S02	0x03

* XXX will be transmitted if the received command does not exist as a setting value.
* When the same setting value is transmitted consecutively for two times or more, the setting is overwritten without responding with XXX even though the command is invalid, and an ACK after deleting the ID is sent back.

■Status acquisition (QUEST) command

This is a command to report the operational status and the setting value.

When a command is received, an applicable content depending on the type of command is read out from the memory and sent back.

The command section consists of three characters, and the first character is fixed to Q. The second character and on are set depending on the content of the information.

When sending back a reply data, the received command, various data converted to ASCII code and checksum of that data are added and sent.

The data length will be subject to each individual specification as the content of a reply will be different depending on the type of QUEST command.

Data transmitted by main

STX	ID	Command	ETX
0x02	**	QS1	0x03

→

Reply data

STX	Command	Parameter	ETX
0x02	QS1	•••••••••	0x03

9.2 RS-232C COMMAND TABLE

If SR+ is set to ON, RS-232C commands cannot be received.
To switch the setting to RS-232C ON during Standby mode using the remote control unit, see 6.2 "RS-232C COMMANDS."

[Description of the items in the table]

① **Division: Classification of commands by definition**
ADJ: Commands for adjustment
FNC: Commands for function setting
SGL: Commands for a single function
SUB: Auxiliary commands

② **Command Reception Point:**
Classification by the microcomputer (main or module [Mod]) that receives a command to execute

③ **Effective Commands during Factory Mode:**
Classification of commands that are effective only in Factory mode (status after the command FAY is received)
The commands that are effective only in Factory mode return ERR during normal operation mode.

Command		Division	Function	command Reception Point		Last Memory	Only FAY is Effective	Remarks
				Mod	Main			
A								
ABL	***	ADJ	Adjusting the upper limit of the power	●		Mod	●	UP/DW key not effective
AMT	S00	FNC	Canceling audio muting		●			
	S01	FNC	Executing audio muting					
APW	S00	FNC	WB correction interlocked with APL: OFF	●			●	
	S01	FNC	WB correction interlocked with APL: ON	●			●	
B								
BCP		SGL	Copying the backup data in the EEPROM	●			●	
BHI	***	ADJ	User white balance : BLUE highlight	●	●	Main		
BLW	***	ADJ	User white balance : BLUE lowlight	●	●	Main		
BRT	***	ADJ	User brightness	●	●	Main		
BSM	S00	FNC	After image/Burning safe mode: OFF	●				
	S01	FNC	After image/Burning safe mode: ON	●				
C								
CBU		SGL	Clearing backup data	●			●	
CHM		SGL	Clearing data of the hour meter	●			●	
CNT	***	ADJ	User contrast	●	●	Main		
CMT		SGL	Clearing data of the maximum temperature	●			●	
CPC		SGL	Clearing power-on count data	●			●	
CPD		SGL	Clearing power-down histrory	●			●	
CPM		SGL	Clearing data of the pulse meter	●			●	
CSD		SGL	Clearing shutdown history	●			●	
D								
DRV	S00	FNC	Main power off	●				
	S01	FNC	Main power on	●				
DW*		SUB	To subtract *** to the adjustment value (*** = 000 to 999, designated by a function command)		●			
E								
ESV	S00	FNC	Setting Power Consumption mode to normal sequence and normal curve	●				
	S01	FNC	Setting Power Consumption mode to silent sequence and normal curve	●				
	S02	FNC	Setting Power Consumption mode to silent sequence and power-saving curve	●				
	S10	FNC	Setting Power Consumption mode to normal sequence and normal curve	●				
	S11	FNC	Setting Power Consumption mode to silent sequence and normal curve	●				
	S12	FNC	Setting Power Consumption mode to silent sequence and power-saving curve	●				

Command		Division	Function	command Reception Point		Last Memory	Only FAY is Effective	Remarks
				Mod	Main			
F								
FAJ		SGL	Determining the flag of the unit adjustment in "adjustment is completed"	●			●	
FAN		SGL	Factory mode off	●	●		●	
FAY		SGL	Factory mode on	●	●			
FST	S01	FNC	Set each memory setting of MTB side to the shipment state of Japan.		●		●	
	S02	FNC	Set each memory setting of MTB side to the shipment state of North America.		●		●	
	S03	FNC	Set each memory setting of MTB side to the shipment state of Europe.		●		●	
G								
GHI	***	ADJ	User white balance : GREEN highlight	●	●	Main		
GLW	***	ADJ	User white balance : GREEN lowlight	●	●	Main		
I								
INP	S01	FNC	Input switch: INPUT 1		●	Main		
	S02	FNC	Input switch: INPUT 2		●	Main		
	S03	FNC	Input switch: INPUT 3		●	Main		
	S04	FNC	Input switch: INPUT 4		●	Main		
	S05	FNC	Input switch: INPUT 5		●	Main		
	S06	FNC	Input switch: INPUT 6		●	Main		
M								
MKC	S00	FNC	MASK off	●		Mod	●	
	S01	FNC	H ramp (slant 1) M	●		Mod	●	
	S02	FNC	H ramp (slant 4) M	●		Mod	●	
	S03	FNC	Slanting ramp M	●		Mod	●	
	S04	FNC	30 for aging	●		Mod	●	
	S05	FNC	05 for aging	●		Mod	●	
	S06	FNC	Erasing afterimage 1	●		Mod	●	
	S07	FNC	Erasing afterimage 2 (RGB: zigzag, V: reverse)	●		Mod	●	
	S08	FNC	White (change in luminance level)	●		Mod	●	
	S09	FNC	PEAK SEEK RASTER	●		Mod	●	
	S10	FNC	For technique evaluation 1	●		Mod	●	
MKS	S00	FNC	MASK off	●		Mod		
	S01	FNC	H ramp (slant 1)	●		Mod	●	
	S02	FNC	H ramp (slant 4)	●		Mod	●	
	S03	FNC	V ramp (slant 1)	●		Mod	●	
	S04	FNC	Slanting ramp	●		Mod	●	
	S05	FNC	Window (Hi= 870, Lo= 102)	●		Mod	●	
	S06	FNC	Window (Hi= 1023, Lo= 102)	●		Mod	●	
	S07	FNC	Window (Hi= 1023)	●		Mod	●	
	S08	FNC	Window (Hi= 1023) 4 %	●		Mod	●	
	S09	FNC	Window (Hi= 1023) 1.25 %	●		Mod	●	
	S10	FNC	Window (1/7 LINE)	●		Mod	●	
	S11	FNC	STRIPE (MGT/GRN)	●		Mod	●	
	S12	FNC	STRIPE (GRN/MGT)	●		Mod	●	
	S13	FNC	B & W, checker (1 line)	●		Mod	●	
	S14	FNC	B & W, checker (2 lines)	●		Mod	●	
	S15	FNC	B & W, checker (4 lines)	●		Mod	●	
	S16	FNC	B & W, checker (8 lines)	●		Mod	●	
	S17	FNC	COLOR BAR	●		Mod	●	

Command		Division	Function	command Reception Point		Last Memory	Only FAY is Effective	Remarks
				Mod	Main			
MKS	S18	FNC	Slanting lines	●		Mod	●	
	S19	FNC	Red & black, checker (1 line)	●		Mod	●	
	S20	FNC	Red & black, checker (2 lines)	●		Mod	●	
	S21	FNC	Red & black, checker (4 ines)	●		Mod	●	
	S22	FNC	Red & black, checker (8 lines)	●		Mod	●	
	S23	FNC	RGB zigzag, V reverse	●		Mod	●	
	S24	FNC	SUS 2000 pulses (black raster)	●		Mod	●	
	S25	FNC	Window (Hi= 870, Lo= 102) Pattern	●		Mod	●	
	S26	FNC	Window (Hi= 1023, Lo= 102) Pattern	●		Mod	●	
	S27	FNC	Window (Hi= 1023) Pattern	●		Mod	●	
	S28	FNC	Window (Hi= 1023) 4 % Pattern	●		Mod	●	
	S29	FNC	Window (Hi= 1023) 1.25 % Pattern	●		Mod	●	
	S30	FNC	Window (1/7 LINE) Pattern	●		Mod	●	
	S31	FNC	Noise ON - White	●		Mod	●	
	S32	FNC	Noise ON - Red	●		Mod	●	
	S33	FNC	Noise ON - Green	●		Mod	●	
	S34	FNC	Noise ON - Blue	●		Mod	●	
	S35	FNC	Noise ON - Black	●		Mod	●	
	S36	FNC	For technique evaluation 1	●		Mod	●	
	S37	FNC	For technique evaluation 2	●		Mod	●	
	S38	FNC	For technique evaluation 3	●		Mod	●	
	S39	FNC	For technique evaluation 4	●		Mod	●	
	S51	FNC	Raster - White	●		Mod	●	
	S52	FNC	Raster - Red	●		Mod	●	
	S53	FNC	Raster - Green	●		Mod	●	
	S54	FNC	Raster - Blue	●		Mod	●	
	S55	FNC	Raster - Black	●		Mod	●	
	S56	FNC	Raster - Cyan	●		Mod	●	
	S57	FNC	Raster - Magenta	●		Mod	●	
	S58	FNC	Raster - Yellow	●		Mod	●	
	S59	FNC	Raster - Light purple 1	●		Mod	●	
	S60	FNC	Raster - Sky blue 1	●		Mod	●	
	S61	FNC	Raster - Yellow egg color	●		Mod	●	
	S62	FNC	Raster - Light blue	●		Mod	●	
	S63	FNC	Raster - Indigo blue	●		Mod	●	
	S64	FNC	Raster - Red 582	●		Mod	●	
	S65	FNC	Raster - Red 850	●		Mod	●	
	S66	FNC	Raster - Green 850	●		Mod	●	
	S67	FNC	Raster - Blue 850	●		Mod	●	
	S68	FNC	Raster - Gray 850	●		Mod	●	
	S69	FNC	Raster - Beige	●		Mod	●	
	S70	FNC	Raster - Green 582	●		Mod	●	
	S71	FNC	Raster - Cyan 464	●		Mod	●	
	S72	FNC	Raster - Sky blue 2	●		Mod	●	
	S73	FNC	Raster - Light purple 2	●		Mod	●	
	S74	FNC	Raster - Gray 362	●		Mod	●	

Command		Division	Function	command Reception Point		Last Memory	Only FAY is Effective	Remarks
				Mod	Main			
MST	S00	FNC	Single screen display		●			
	S01	FNC	PsideP (main size is normal)		●			
	S08	FNC	SWAP (swapping pictures between the main screen and subscreen)		●	Main		
O								
OSD	S00	001	Turning OSD setting to off		●	Main		
	S01	001	Turning OSD setting to off		●	Main		
P								
PAV	S**	FNC	Switching panel functions interlocked with the AV selection	●				
PBH	***	ADJ	Panel white balance adjustment - Blue highlight	●		Mod	●	UP/DW key not effective
PBL	***	ADJ	Panel white balance adjustment - Blue low light	●		Mod	●	UP/DW key not effective
PDM	S00	FNC	Passing PD signals to the Power SUPPLY Unit => Power-down	●				
	S01	FNC	Not passing PD signals to the Power SUPPLY Unit => No power-down	●				
PFN		SGL	(Panel) Factory mode: off	●			●	
PFS		SGL	Setup at shipment	●			●	
PFY		SGL	(Panel) Factory mode: on	●			●	The MASK setting and picture-quality settings of the MB remain the same.
PGH	***	ADJ	Panel white balance adjustment - Green highlight	●		Mod	●	UP/DW key not effective
PGL	***	ADJ	Panel white balance adjustment - Green low light	●		Mod	●	UP/DW key not effective
PGM	001	FNC	Setting of the gamma table	●				
PMT	S00	FNC	Canceling panel muting	●				
	S01	FNC	Panel muting	●				
POF		SGL	Power off	●	●	Main		
PON		SGL	Power on	●	●	Main		
PPT	S00	FNC	Panel protection: off	●			●	
	S01	FNC	Panel protection: on	●			●	
PRH	***	ADJ	Panel white balance adjustment - Red highlight	●		Mod	●	UP/DW key not effective
PRL	***	ADJ	Panel white balance adjustment - Red low light	●		Mod	●	UP/DW key not effective
PUC	S00	FNC	Pure cinema: off	●	●	Main	●	
	S01	FNC	Pure cinema: standard	●	●	Main	●	
	S02	FNC	Pure cinema: advanced	●	●	Main	●	
Q								
QAJ		QST	Acquiring various adjustment values	●				
QIP		QST	Acquiring various input signal data	●				
QMT		QST	Acquiring temperature of MTB side and Fan speed		●			
QNG		QST	Acquiring shut-down information of MTB side		●			
QPD		QST	Acquiring logs of power-down points	●				
QPM		QST	Acquiring data of the pulse meter	●				
QPW		QST	Acquiring panel white balance adjustment values	●				
QS1		QST	Acquiring unit data, such as the software version common to all models, regardless of destination	●	●			
QS2		QST	Acquiring data on the status of the unit, such as temperature	●				
QSD		QST	Acquiring data on shutdown	●				
QSI		QST	Acquiring data related with signals of panel side	●				

Command		Division	Function	command Reception Point		Last Memory	Only FAY is Effective	Remarks
				Mod	Main			
R								
RBL	S**	FNC	Setting of blue level for panel degradation correction	●		Mod	●	
RGL	S**	FNC	Setting of green level for panel degradation correction	●		Mod	●	
RHI	***	ADJ	User white balance - Red highlight	●	●	Main		UP/DW key not effective
RLW	***	ADJ	User white balance - Red low light	●	●	Main		UP/DW key not effective
RRL	S**	FNC	Setting of red level for panel degradation correction	●		Mod	●	
RSW	***	ADJ	Adjustment of the width of XY reset pulse 1	●		Mod	●	UP/DW key not effective
RYW	***	ADJ	Adjustment of the width of XY reset pulse 2	●		Mod	●	UP/DW key not effective
S								
SDM	S00	FNC	Shutdown enabled	●				
	S01	FNC	Shutdown prohibited	●				
SFR	S01	FNC	Measures against AM radio noise - Pattern 1	●		Mod	●	
	S02	FNC	Measures against AM radio noise - Pattern 2	●		Mod	●	
	S03	FNC	Measures against AM radio noise - Pattern 3	●		Mod	●	
	S04	FNC	Measures against AM radio noise - Pattern 4	●		Mod	●	
	S05	FNC	Measures against AM radio noise - Pattern 5	●		Mod	●	
	S06	FNC	Measures against AM radio noise - Pattern 6	●		Mod	●	
	S07	FNC	Measures against AM radio noise - Pattern 7	●		Mod	●	
	S08	FNC	Measures against AM radio noise - Pattern 8	●		Mod	●	
SMM	S**	FNC	Setting of the effective area during streaking correction	●			●	
SN0	***	ADJ	Setting of the serial No. 0 (panel)	●		Mod	●	UP/DW key not effective Alphabetics can be input.
SN1	***	ADJ	Setting of the serial No. 1 (panel)	●		Mod	●	UP/DW key not effective Alphabetics can be input.
SN2	***	ADJ	Setting of the serial No. 2 (panel)	●		Mod	●	UP/DW key not effective Alphabetics can be input.
SN3	***	ADJ	Setting of the serial No. 3 (panel)	●		Mod	●	UP/DW key not effective Alphabetics can be input.
SN4	***	ADJ	Setting of the serial No. 4 (panel)	●		Mod	●	UP/DW key not effective Alphabetics can be input.
SSI	S01	FNC	Sub input switch: INPUT 1		●	Main		
	S02	FNC	Sub input switch: INPUT 2		●	Main		
	S03	FNC	Sub input switch: INPUT 3		●	Main		
	S04	FNC	Sub input switch: INPUT 4		●	Main		
	S05	FNC	Sub input switch: INPUT 5		●	Main		
	S06	FNC	Sub input switch: INPUT 6		●	Main		
SSM	S00	FNC	Turning the external SSCG operation off	●			●	
	S01	FNC	Turning the external SSCG operation on (normal operation)	●			●	
SZM	S00	FNC	Setting the screen size to Dot by Dot or PARTIAL		●	Main		
	S01	FNC	Setting the screen size to 4 : 3		●	Main		
	S02	FNC	Setting the screen size to FULL or FULL 1080i		●	Main		
	S03	FNC	Setting the screen size to ZOOM		●	Main		
	S04	FNC	Setting the screen size to CINEMA		●	Main		
	S05	FNC	Setting the screen size to WIDE		●	Main		
	S06	FNC	Setting the screen size to FULL 14 : 9		●	Main		
	S07	FNC	Setting the screen size to CINEMA 14 : 9		●	Main		
	S08	FNC	Setting the screen size to FULL 1035i		●	Main		

Command		Division	Function	command Reception Point		Last Memory	Only FAY is Effective	Remarks
				Mod	Main			
U								
UAJ		SGL	Determining the flag for the unit adjustment in "not adjusted"	●				
UP*		SUB	To add *** to the adjustment value *** = 000 to 999 With DW0, the adjustment value is added by 10.		●			
V								
VFQ	S01	FNC	Setting the frequency in Mask mode to VD-48 Hz	●		Mod	●	
	S02	FNC	Setting the frequency in Mask mode to VD-50 Hz	●		Mod	●	
	S03	FNC	Setting the frequency in Mask mode to VD-60 Hz	●		Mod	●	
	S05	FNC	Setting the frequency in Mask mode to VD-72 Hz	●		Mod	●	
	S06	FNC	Setting the frequency in Mask mode to VD-75 Hz	●		Mod	●	
	S13	FNC	Setting the frequency in Mask mode to PC-60 Hz	●		Mod	●	
	S14	FNC	Setting the frequency in Mask mode to PC-70 Hz	●		Mod	●	
	S22	FNC	Setting the frequency in Mask mode to VD-50 Hz (nonstandard)	●		Mod	●	
	S23	FNC	Setting the frequency in Mask mode to VD-60 Hz (nonstandard)	●		Mod	●	
	S25	FNC	Setting the frequency in Mask mode to VD-72 Hz (nonstandard)	●		Mod	●	
	S26	FNC	Setting the frequency in Mask mode to VD-75 Hz (nonstandard)	●		Mod	●	
VOF	***	ADJ	Adjustment of the reference value of Vofs voltage	●		Mod	●	UP/DW key not effective
VOL	UP*, DW*, ***	ADJ	To adjust the volume (to be used in combination with UP*/DW*) *** = 000 to 060		●	Main		
VRP	***	ADJ	Adjustment of the reference value of Vrst-p voltage	●		Mod	●	UP/DW key not effective
VSU	***	ADJ	Adjustment of the reference value of Vsus voltage	●		Mod	●	UP/DW key not effective
W								
WBI	S00	FNC	Panel WB standard output mode: off	●			●	
	S01	FNC	Panel WB standard output mode: on	●			●	
X								
XSB	***	ADJ	X-SUS-B ADJ	●		Mod	●	UP/DW key not effective
Y								
YSB	***	ADJ	Y-SUS-B ADJ	●		Mod	●	UP/DW key not effective
YTB	***	ADJ	Y-SUSTAIL T2 ADJ	●		Mod	●	UP/DW key not effective
YTG	***	ADJ	Y-SUSTAIL T1 ADJ	●		Mod	●	UP/DW key not effective
YTW	***	ADJ	Y-SUSTAIL W ADJ	●		Mod	●	UP/DW key not effective
Z								
ZME	SGL		Initializing the video EEPROM data		●		●	
ZPR	SGL		Initializing the setting data to which no adjustment command is provided	●			●	

9.3 OUTLINE OF COMMANDS

9.3.1 QS1

■ Acquisition of panel statuses • • • [QS1]

The command QS1 is for acquiring data necessary for authentication of both the main unit's microcomputer and the module's microcomputer.

Command Format	Effective Operation Modes	Function	Remarks
[QS1]	Continually	To acquire data on product status	Return data: 105 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QS1
1	Resolution/size	1 Byte	F
2	Generation	1 Byte	7
3	Destination	1 Byte	*
4	Grade	1 Byte	*
5	Product type	1 Byte	M
6	MDUcom-Boot	3 Byte	01A
7	MDUcom-PRG	8 Byte	001A_M "space × 2"
8	ASTRA-Boot	3 Byte	01A
9	ASTRA-PRG	8 Byte	001Y "space × 4"
10	SQ-VIDEO	4 Byte	001Y
11	SQ-PC	4 Byte	001Y
12	Panel type 1	1 Byte	P
13	Reserved	7 Byte	*******
14	, (comma)	1 Byte	
15	MTB generation	1 Byte	7
16	MTB destination	1 Byte	*
17	MTB grade	1 Byte	W
18	MTB product type	1 Byte	M
19	IF microcomputer	4 Byte	
20	Main microcomputer	8 Byte	
21	Main microcomputer boot	4 Byte	
22	Multi processor	8 Byte	
23	Multi processor boot	4 Byte	
24	Reserved	24 Byte	
CS		2 Byte	7B

1: Resolution/size	
3	1024*768-42
4	1024*768-43
5	1280*768-50
6	1365*768-50
7	1365*768-60
F	1920*1080-50

2: Generation	
6	G6
7	G7
8	G8
9	G9
0	G10

3: Destination	
*	Common
A	North America (Reserved)
E	Europe (Reserved)
J	Japan (Reserved)

4: Grade	
*	Common

5: Product type	
S	System model
B	Integrated TV
M	Monitor
D	Standard module

12: Panel type 1	
P	Conventional panel
F	High-efficiency panel

16: Destination of MTB	
J	Japan
A	North America
E	Europe

18: Product type of MTB	
S	System model
B	Integrated TV
M	FHD

15, 17, 19 to 23: Product type of MTB	
IF microcomputer	Version of IF microcomputer
Main microcomputer	Common version of Main microcomputer
Main microcomputer boot	Boot version of Main microcomputer
Multi processor	Common version of Multi processor
Multi processor boot	Boot version of Multi processor

9.3.2 QS2

■ Acquisition of panel operation data • • • [QS2]

The command QS2 is for acquiring data on the panel's operations. Basically, this command is used for the module's microcomputer to inform the main unit's microcomputer of changes in panel operation.

Command Format	Effective Operation Modes	Function	Remarks
[QS2]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+23(DATA)+2(CS)= 28 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QS2
1	Notification of mode shifting to STB	1 Byte	1
2	Flag for adjustment of the main unit	1 Byte	0
3	Flag for adjustment-data backup	1 Byte	0
4	"1st PD" data	1 Byte	0
5	"2nd PD" data	1 Byte	0
6	Still picture detection	1 Byte	0
7	Reserved	2 Byte	**
8	Temperature data (TEMP 1)	3 Byte	128
9	SD main data	1 Byte	0
10	SD subdata	1 Byte	0
11	Operation status induced by SD	1 Byte	0
12	Data from the hour meter	8 Byte	00000259
13	MASK indication	1 Byte	0
CS		2 Byte	4A

Note : "00000259" of "Data from the hour meter" means 2 hours 59 minuts.

1: Notification of mode shifting to Standby	
0	Entering Standby mode failed
1	Entering Standby mode succeeded

2: Adjustment of the main unit	
0	Adjustment completed
1	Adjustment not completed

3: Adjustment-data backup	
0	With backup data
1	No data

4, 5: PD data	
0	No PD data
1	Not used
2	POWER
3	SCAN
4	SCN-5V
5	Y-DRV
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRV
A	X-DCDC
B	X-SUS
C	Not used
D	Not used
E	Not used
F	UNKNOWN

6: Still picture detection	
0	Normal screen
1	Still picture

9: SD main data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	TEMP

10-1: SD-Sub (SQ-IC)	
0	No SD-Sub data
1	Communication error (LR/G7)
2	Drive stop (LR/G7)
3	BUSY
4	Communication error (L)
5	Drive stop (L)
6	Incoherent versions (H/S)
7	Incoherent versions (L/R)
8	Not used
9	Communication error (R)
A	Drive stop (R)

10-2: SD-Sub (IIC)	
0	No SD-Sub data
1	EEPROM
2	BACKUP
3	DAC

10-3: SD-Sub (TEMP)	
0	No SD-Sub data
1	TEMP1
2	Reserved

11: Operation status induced by SD	
0	Normal
1	Relay-off completed
2	During warning indication

13: MASK indication	
0	MASK-OFF
1	MASK-ON

- If no power-down is generated, 00 is transmitted. If a power-down is generated, data on power-down points are transmitted, with upper-level point as 1st PD and lower-level point as 2nd PD.
- The TEMP1 input value (10 bits) is transmitted in 3 bytes in decimal notation (range: 000-999) as temperature data. Values of 1000-1023 are handled as 999. (During Standby mode, the value retained in RAM is transmitted.)
- As to data on the hour-meter count, minute data (3 bytes) stored in the EEPROM are converted to hour data and described in 6 characters. These 6 characters and 2 characters representing minute are transmitted. The maximum recording time is 279,620 hours 16 minutes.

9.3.3 QIP

■ Acquisition of other data on the panel • • • [QIP]

The command QIP is for acquiring data other than those available with QS1 (data necessary before turning the power on) and QS2 (data to inform of operational status change).

Command Format	Effective Operation Modes	Function	Remarks
[QIP]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+58(DATA)+2(CS)= 63 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QIP
1	SERIAL	15 Byte	- - - - - - - - - - - - - - -
2	HOUR METER	8 Byte	00000000
3	TOTAL HR MTR	8 Byte	00000000
4	PON COUNTER	8 Byte	00000000
5	TEMP1 acquisition (Temperature value)	5 Byte	+23.5
6	TEMP0 acquisition (Not used)	5 Byte	+00.0 (Fixation)
7	MAX-TEMP1 acquisition (Temperature value)	5 Byte	+78.3
8	Reserved	4 Byte	****
CS		2 Byte	94

- Data for the Hour Meter and Backup Hour Meter are transmitted according to the same rules as for QS2.
- Data for TEMP1 and MAX_TEMP1 are output in 5 characters. The first character is assigned to + or -, and the fourth character is assigned as the decimal point. The maximum output value is +99.9. If an AD value greater than +99.9 is acquired, +99.9 will be retained.

9.3.4 QAJ

■ Acquisition of panel adjustment data (common data) • • • [QAJ]

The command QAJ is for acquiring data on the panel's factory-preset items that are common to the main unit and that share the same memory.

Command Format	Effective Operation Modes	Function	Remarks
[QAJ]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+41(DATA)+2(CS)= 46 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QAJ
1	V-SUS adjustment value	3 Byte	128
2	V-OFT adjustment value	3 Byte	128
3	V-RST-P adjustment value	3 Byte	128
4	Reserved	3 Byte	***
5	XSB adjustment value	3 Byte	128
6	YSB adjustment value	3 Byte	128
7	YTG adjustment value	3 Byte	128
8	YTW adjustment value	3 Byte	128
9	RSW adjustment value	3 Byte	128
10	YTB adjustment value	3 Byte	128
11	RYW adjustment value	3 Byte	128
12	R-REVISE setting value	1 Byte	0
13	G-REVISE setting value	1 Byte	0
14	B-REVISE setting value	1 Byte	0
CS		2 Byte	B7

- For each REVISE setting value, the level set for RRL, RGL, or RBL is transmitted as one character.

9.3.5 QPW

■ Acquisition of ABL/WB adjustment data • • • [QPW]

The command QPW is for acquiring data on the panel's factory-preset items whose memory tables are changed in sequence.

Command Format	Effective Operation Modes	Function	Remarks
[QPW]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+35(DATA)+2(CS)= 40 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QPW
1	Drive sequence	3 Byte	60V
2	Standard/nonstandard	1 Byte	S
3	Type of ABL/WB tables	2 Byte	T2
4	ABL adjustment value	3 Byte	128
5	R-HIGH adjustment value	3 Byte	256
6	G-HIGH adjustment value	3 Byte	256
7	B-HIGH adjustment value	3 Byte	256
8	R-LOW adjustment value	3 Byte	512
9	G-LOW adjustment value	3 Byte	512
10	B-LOW adjustment value	3 Byte	512
11	Gamma setting	1 Byte	A
12	Streaking correction	1 Byte	1
13	Peripheral luminance correction	1 Byte	0
14	Reserved	1 Byte	*
15	WB interlocked with APL	1 Byte	0
16	Transition of protective operations	1 Byte	0
17	Reserved	2 Byte	**
CS		2 Byte	37

1: Drive sequence	
48V	Video 48 Hz
50V	Video 50 Hz
60V	Video 60 Hz
72V	Video 72 Hz
75V	Video 75 Hz
60P	PC 60 Hz
70P	PC 70 Hz

2: Standard/ nonstandard	
S	Standard
N	Nonstandard

3: Type of ABL/WB tables	
Tn	n: 1 to 4

11: Gamma setting	
n	0 to F

12, 15: Setting for Items 12 and 15	
0	OFF
1	ON

13: Peripheral luminance correction	
0	OFF
2	ON (interlocked with APL)

16: Transition of brightness by protective operations	
0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

9.3.6 QPM

■ Acquisition of parameters • • • [QPM]

The command QPM is for acquiring the accumulated number of pulses for each of 5 blocks from the EEPROM.

Command Format	Effective Operation Modes	Function	Remarks
[QPM]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+40(DATA)+2(CS)= 45 Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPM
1	Pulse meter B 1	8Byte	00000000
2	Pulse meter B 2	8Byte	00000000
3	Pulse meter B 3	8Byte	00000000
4	Pulse meter B 4	8Byte	00000000
5	Pulse meter B 5	8Byte	00000000
CS		2Byte	E7

- The high-order 3 bytes stored in memory as pulse-meter counts for the 5 blocks are multiplied by 256 to be converted to decimal, then the high-order 8 digits (the low-order 2 digits rounded off) are transmitted (the unit for response value is million pulses).

9.3.7 QPD

■ Acquisition of PD logs • • • [QPD]

The command QPD is for acquiring data from the 8 latest power-down (PD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QPD]	All operations	To acquire data on the power-down logs	Return data: 3 (ECO)+80(DATA)+2(CS)= 85 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QPD
1	Latest "1st PD" data	1 Byte	A
2	Latest "2nd PD" data	1 Byte	2
3	Data from the hour meter for the latest PD	8 Byte	00010020
4	Second latest "1st PD" data	1 Byte	E
5	Second latest "2nd PD" data	1 Byte	9
6	Data from the hour meter for the second latest PD	8 Byte	00008523
7	Third latest "1st PD" data	1 Byte	4
8	Third latest "2nd PD" data	1 Byte	3
9	Data from the hour meter for the third latest PD	8 Byte	00004335
10	Fourth latest "1st PD" data	1 Byte	2
11	Fourth latest "2nd PD" data	1 Byte	0
12	Data from the hour meter for the fourth latest PD	8 Byte	00000945
13	Fifth latest "1st PD" data	1 Byte	4
14	Fifth latest "2nd PD" data	1 Byte	0
15	Data from the hour meter for the fifth latest PD	8 Byte	00000715
16	Sixth latest "1st PD" data	1 Byte	A
17	Sixth latest "2nd PD" data	1 Byte	2
18	Data from the hour meter for the sixth latest PD	8 Byte	00000552
19	Seventh latest "1st PD" data	1 Byte	A
20	Seventh latest "2nd PD" data	1 Byte	0
21	Data from the hour meter for the seventh latest PD	8 Byte	00000213
22	Eighth latest "1st PD" data	1 Byte	D
23	Eighth latest "2nd PD" data	1 Byte	0
24	Data from the hour meter for the eighth latest PD	8 Byte	000001A7
CS		2 Byte	27

1, 2, 4, 5: PD data	
0	No PD
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	Address
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	Not used
D	Not used
E	Not used
F	UNKNOWN

9.3.8 QSD

■ Acquisition of SD logs • • • [QSD]

The command QSD is for acquiring the data from the 8 latest shutdown (SD) logs on the FHD DIGITAL Assy.

Command Format	Effective Operation Modes	Function	Remarks
[QSD]	All operations	To acquire data on the shutdown logs	Return data: 3 (ECO)+80(DATA)+2(CS)= 85 Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSD
1	Latest SD data	1byte	1
2	Latest SD subcategory data	1byte	0
3	Data from the hour meter for the latest SD	8byte	00752013
4	Second latest SD data	1byte	5
5	Second latest SD subcategory data	1byte	0
6	Data from the hour meter for the second latest SD	8byte	00495204
7	Third latest SD data	1byte	2
8	Third latest SD subcategory data	1byte	3
9	Data from the hour meter for the third latest SD	8byte	00100355
10	Fourth latest SD data	1byte	2
11	Fourth latest SD subcategory data	1byte	5
12	Data from the hour meter for the fourth latest SD	8byte	00075620
13	Fifth latest SD data	1byte	1
14	Fifth latest SD subcategory data	1byte	0
15	Data from the hour meter for the fifth latest SD	8byte	00000852
16	Sixth latest SD data	1byte	2
17	Sixth latest SD subcategory data	1byte	5
18	Data from the hour meter for the sixth latest SD	8byte	000000451
19	Seventh latest SD data	1byte	0
20	Seventh latest SD subcategory data	1byte	0
21	Data from the hour meter for the seventh latest SD	8byte	00000000
22	Eighth latest SD data	1byte	0
23	Eighth latest SD subcategory data	1byte	0
24	Data from the hour meter for the eighth latest SD	8byte	00000000
CS		2Byte	7D

● SD data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	TEMP

● SD subcategory (SQ-IC)	
0	No SD-Sub data
1	Communication error (LR)
2	Drive stop (LR)
3	BUSY
4	Communication error (L)
5	Drive stop (L)
6	Incoherent versions (H/S)
7	Incoherent versions (L/R)
8	Not used
9	Communication error (R)
A	Drive stop (R)

● SD subcategory (MDU-IIC)	
0	No SD-Sub data
1	EEPROM
2	BACKUP
3	DAC

● SD subcategory (TEMP)	
0	No SD-Sub data
1	TEMP1
2	Reserved

9.3.9 QMT

QMT: Returning information of the main side temperature and FAN operation.

Command	Effective Operation Modes	Function	Remarks
QMT	Continually	Status output	Return data : 9 byte

Data Content		Size	Example
ECO		3 byte	QMT only
1	TEMP2	3 byte	000
2	FAN (rotary speed)	1 byte	0

FAN (rotary speed)	
0	STOP
1	LOW
2	HIGH
3	MIDDLE

9.3.10 QNG

QNG: Returning data (logs keep on Main microcomputer) on shutdown of the main microcomputer.

Command	Effective Operation Modes	Function	Remarks
QNG	Continually	Status output	Return data : 101 byte

Order	Data	Size	Context
ECO		3 byte	QNG only
1	Latest NG data	1 byte	0
2	Data of subcategory for the latest NG	1 byte	0
3	Data of Hour meter for the latest NG	7 byte	0000000
4	Data of temperature (TEMP2) for the latest NG	3 byte	000
5	2nd latest NG data	1 byte	0
6	Data of subcategory for the 2nd latest NG	1 byte	0
7	Data of Hour meter for the 2nd latest NG	7 byte	0000000
8	Data of temperature (TEMP2) for the 2nd latest NG	3 byte	000
9	3rd latest NG data	1 byte	0
10	Data of subcategory for the 3rd latest NG	1 byte	0
11	Data of Hour meter for the 3rd latest NG	7 byte	0000000
12	Data of temperature (TEMP2) for the 3rd latest NG	3 byte	000
13	4th latest NG data	1 byte	0
14	Data of subcategory for the 4th latest NG	1 byte	0
15	Data of Hour meter for the 4th latest NG	7 byte	0000000
16	Data of temperature (TEMP2) for the 4th latest NG	3 byte	000
17	5th latest NG data	1 byte	0
18	Data of subcategory for the 5th latest NG	1 byte	0
19	Data of Hour meter for the 5th latest NG	7 byte	0000000
20	Data of temperature (TEMP2) for the 5th latest NG	3 byte	000
21	6th latest NG data	1 byte	0
22	Data of subcategory for the 6th latest NG	1 byte	0
23	Data of Hour meter for the 6th latest NG	7 byte	0000000
24	Data of temperature (TEMP2) for the 6th latest NG	3 byte	000
25	7th latest NG data	1 byte	0
26	Data of subcategory for the 7th latest NG	1 byte	0
27	Data of Hour meter for the 7th latest NG	7 byte	0000000
28	Data of temperature (TEMP2) for the 7th latest NG	3 byte	000
29	8th latest NG data	1 byte	0
30	Data of subcategory for the 8th latest NG	1 byte	0
31	Data of Hour meter for the 8th latest NG	7 byte	0000000
32	Data of temperature (TEMP2) for the 8th latest NG	3 byte	000
CS		2 byte	77

• Details on the NG data and subcategory

Data	Cause of Shutdown	Remarks
0	Normal	
1	Communication failure of Module microcomputer	
2	3-wire Serial Communication failure of Main microcomputer.	Subcategory ⇒ 1
3	IIC Communication failure of Main microcomputer	Subcategory ⇒ 2
4	Communication failure of Main microcomputer & Unknown Error	
5	Fan stopped	
6	Abnormally high temperature of MTB section	
8	Abnormally in ASIC power (POWER)	Subcategory ⇒ 3
B	Short circuit the speaker	

Subcategory of NG
=> 1: Data on Subcategories for failure in 3-wire serial communication of Main microcomputer

Data	Cause of Shutdown	Remarks
2	Multi processor main communication failure (MULIT1)	
4	Multi processor communication failure (I/P)	
6	Multi processor sub communication failure (SLAVE)	
7	Main communication failure (FPGA1)	
8	Multi processor communication failure (FPGA2)	

Subcategory of NG
=> 2: Data on Subcategories for failure in IIC communication of Main microcomputer

Data	Cause of Shutdown	Remarks
0	Non subcategory	
4	AV Switch	
5	RGB Switch	
8	Main VDEC	
9	Sub VDEC	
A	AD/PLL	
B	HDMI	
G	64K EEPROM	
H	AUDIO IC	
K	DVI Receiver	
L	AUDIO Switch	
M	VOLUME IC	

Subcategory of NG
=> 3: Data on Subcategories for failure in the ASIC power (POWER)

Data	Cause of Shutdown	Remarks
1	DCDC converter reduce voltage (M-DCDC)	
2	Relay power reduce voltage (RELAY)	

9.3.11 QSI

■ Acquisition of input signal data • • • [QSI]

The command QSI is for acquiring all data on input video signals.

Command Format	Effective Operation Modes	Function	Remarks
[QSI]	All operations	To acquire all data on input video signals	Return data: 3 (ECO)+66(DATA)+2(CS)= 71 Byte

Data Arrangement		Data Length	Output Example
ECO		3 Byte	QSI
1	Type of drive sequence	3 Byte	60V
2	Standard/nonstandard	1 Byte	S
3	Type of ABL/WB tables	2 Byte	T1
4	Total value of PCN	4 Byte	0256
5	Total value of PRH	4 Byte	0256
6	Total value of PGH	4 Byte	0256
7	Total value of PBH	4 Byte	0256
8	Total value of PBR	4 Byte	0512
9	Total value of PRL	4 Byte	0512
10	Total value of PGL	4 Byte	0512
11	Total value of PBL	4 Byte	0512
12	Total value of ABL	3 Byte	128
13	Detection of V frequency	4 Byte	6002
14	Detection of existence of H	1 Byte	Y
15	Reserved	3 Byte	***
16	Obtained APL data	4 Byte	1023
17	Number of SUS pulses	4 Byte	0457
18	Result of detection of still picture	1 Byte	1
19	Result of detection of cracking in the panel	1 Byte	1
20	Result of detection for scanning protection	1 Byte	1
21	Result of detection for external protection	1 Byte	1
22	Transition of protection operation	1 Byte	0
23	Reserved	4 Byte	****
CS		2 Byte	27

14: Detection of existence of H	
N	No H
Y	H detected

18 to 20: Each protection operation status	
0	Setting OFF
1	Setting ON (waiting)
2	Setting ON (during operation)

22: Transition of brightness by protection operation	
0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

- If data for an item cannot be obtained during Standby mode, the return data for that item will be "*."
- The types of data for Items 1-3 in the table (drive sequence, standard/nonstandard, and type of ABL/WB tables) are the same as with the command QPW.
- Each total value for Items 4-11 represents that of panel WB, user WB, and degradation correction, and the actual data being sent to the ASTRA are output.
- Detection of V frequency: The V signal input to the panel is measured in the range of 30.51 to 99.99 Hz. The measured value is multiplied by 100 and then output.
- Number of SUS pulses : The number is calculated from data from APL and the drive sequence. The output value must be between 0174 and 2752.
- APL value: The APL value for the input video signal (or mask indication) will be output in the range of 0000 to 1023.

9.3.12 DRV

- **DRV**

Drive ON/OFF: To turn on or off only the high-power system

Command	Effective Operation Modes	Operation	Remarks
DRV+S00	For details on how to issue a command during normal operation modes, including Standby mode, see 9.2.	Drive OFF	Issue the next command within 10 seconds after the DRV+S00 commands are issued.
DRV+S01		Drive ON	

10. GENERAL INFORMATION

10.1 POWER SUPPLY PROCESS DIAGRAM

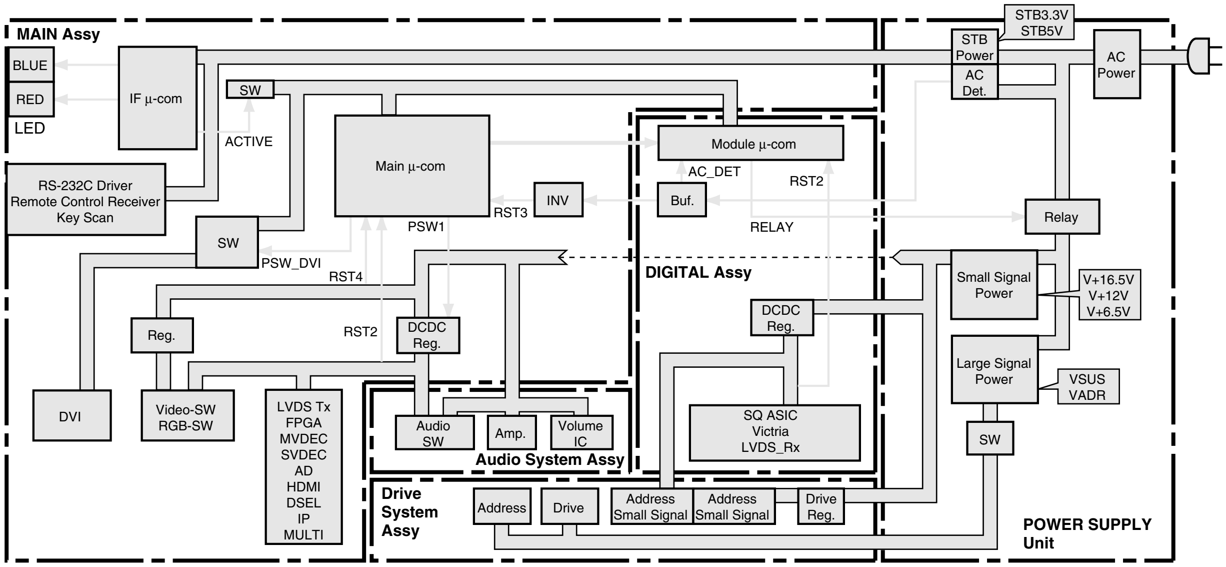
■ Configuration of the Power System -Power-on status in each mode-

① Unplugging of the AC power cord and/or power shutoff at the MAIN POWER switch

Status: No AC power is supplied to the unit at all.

Transition to another mode:

- Plugging in of the AC power cord (AC power is supplied): Shifting to status ③.
- Setting of the MAIN POWER switch to ON (AC power is supplied): Shifting to status ③.



MAIN Assy
BLUE
RED
LED
IF µ-com
SW
ACTIVE
RS-232C Driver
Remote Control Receiver
Key Scan
Main µ-com
SW
PSW_DVI
PSW1
RST3
RST4
INV
RST2
Reg.
DCDC Reg.
DVI
Video-SW
RGB-SW
LVDS Tx
FPGA
MVDEC
SVDEC
AD
HDMI
DSEL
IP
MULTI
Audio SW
Amp.
Volume IC
Audio System Assy
Drive System Assy
Address
Drive
Address Small Signal
Address Small Signal
Drive Reg.
Module µ-com
AC_DET
RST2
Buf.
RELAY
DIGITAL Assy
DCDC Reg.
SQ ASIC
Victria
LVDS_Rx
STB3.3V
STB5V
STB Power
AC Det.
AC Power
Relay
Small Signal Power
V+16.5V
V+12V
V+6.5V
Large Signal Power
VSUS
VADR
SW
POWER SUPPLY Unit

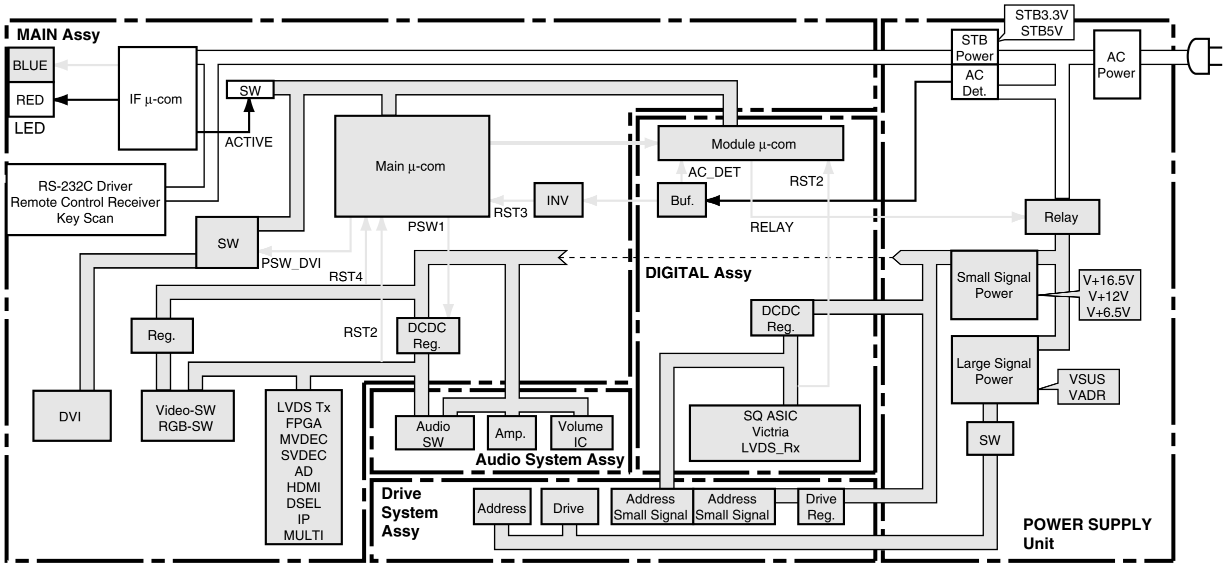
② Passive Standby mode

Status: Power is supplied to only the IF microcomputer and part of its surrounding circuits. The standby mode in most cases is Passive Standby mode.

Operation: The IF microcomputer deactivates the Active port to "L" (OFF) and the SW to OFF, in order to turn off the power to the Main microcomputer and the Module microcomputer.

Transition to another mode:

- Unplugging of the AC power cord: Shifting to status ①.
- Setting of the MAIN POWER switch to OFF: Shifting to status ①.
- User operation (using a remote control unit or a side key): Shifting to status ③ (to notify the Main microcomputer).
  Then, shifting to status ④, if required



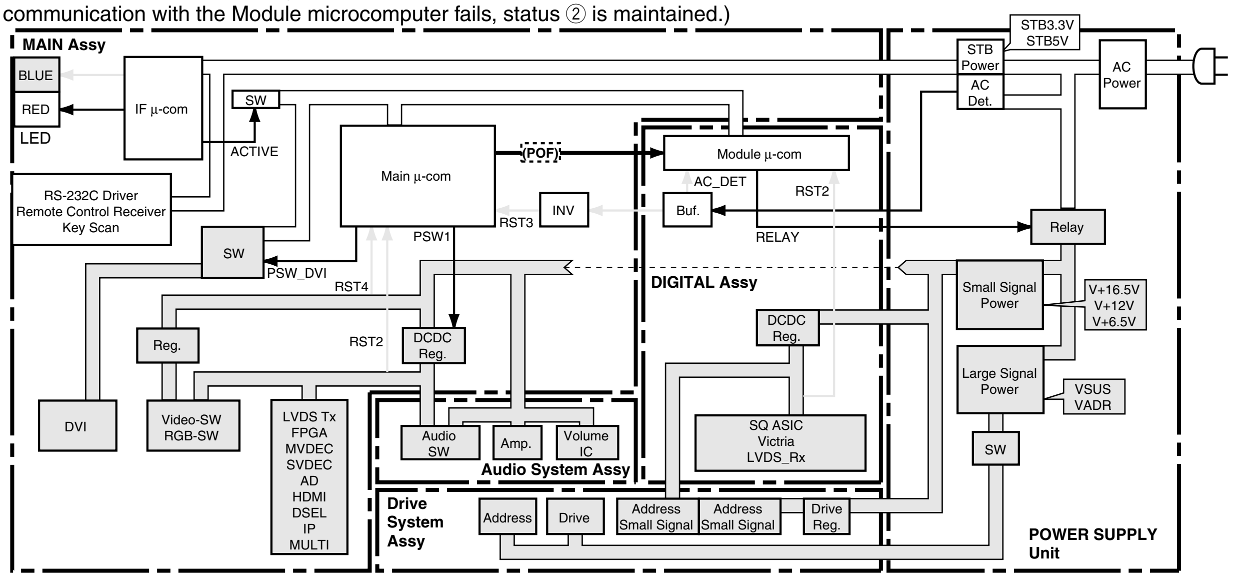
MAIN Assy
BLUE
RED
LED
IF µ-com
SW
ACTIVE
RS-232C Driver
Remote Control Receiver
Key Scan
Main µ-com
SW
PSW_DVI
PSW1
RST3
RST4
INV
RST2
Reg.
DCDC Reg.
DVI
Video-SW
RGB-SW
LVDS Tx
FPGA
MVDEC
SVDEC
AD
HDMI
DSEL
IP
MULTI
Audio SW
Amp.
Volume IC
Audio System Assy
Drive System Assy
Address
Drive
Address Small Signal
Address Small Signal
Drive Reg.
Module µ-com
AC_DET
RST2
Buf.
RELAY
DIGITAL Assy
DCDC Reg.
SQ ASIC
Victria
LVDS_Rx
STB3.3V
STB5V
STB Power
AC Det.
AC Power
Relay
Small Signal Power
V+16.5V
V+12V
V+6.5V
Large Signal Power
VSUS
VADR
SW
POWER SUPPLY Unit

③ Active Standby mode

Status: Power is supplied to the IF microcomputer, Main microcomputer, Module microcomputer, and their surrounding circuits.
Operation:
In a case of shifting from status ②:
The IF microcomputer activates the Active port to "H" (ON) and the SW to ON, in order to supply power to the Standby circuitry.
In a case of shifting from status ④:
Main microcomputer: It issues the POF command to the Module microcomputer.
Module microcomputer: After receiving the POF command from the Main microcomputer, it deactivates the RELAY port to "L" (OFF) in order to turn off the relay circuit in the POWER SUPPLY Unit.
Transition to another mode:

- Unplugging of the AC power cord: Shifting to status ①.
- Setting of the MAIN POWER switch to OFF: Shifting to status ①.
- Setting of the POWER switch to ON: Shifting to status ④.
- No user operation for about 10 seconds: Shifting to status ②. However, after a shutdown or power-down, Active Standby mode will be maintained in the absence of any user operation for more than 10 seconds.

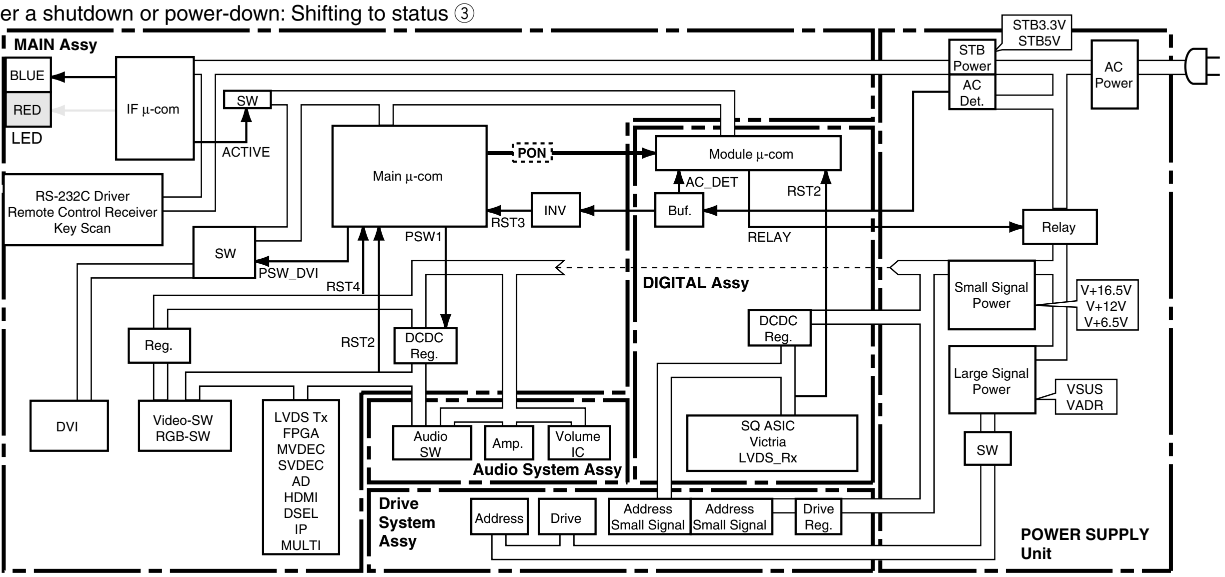
(If communication with the Module microcomputer fails, status ② is maintained.)


MAIN Assy
BLUE
RED
LED
IF μ-com
SW
ACTIVE
RS-232C Driver
Remote Control Receiver
Key Scan
Main μ-com
(POF)
Module μ-com
AC_DET
RST2
INV
Buf.
RST3
PSW1
RELAY
Relay
SW
PSW_DVI
RST4
DIGITAL Assy
DCDC Reg.
Reg.
RST2
DCDC Reg.
DVI
Video-SW RGB-SW
LVDS Tx FPGA MVDEC SVDEC AD HDMI DSEL IP MULTI
Audio SW
Amp.
Volume IC
Audio System Assy
SQ ASIC Victria LVDS_Rx
Drive System Assy
Address
Drive
Address Small Signal
Address Small Signal
Drive Reg.
STB3.3V STB5V
STB Power
AC Det.
AC Power
Small Signal Power
V+16.5V V+12V V+6.5V
Large Signal Power
VSUS VADR
SW
POWER SUPPLY Unit

④ POWER ON

Status: Power is supplied to all circuits. Normal operation mode
Operation:
In a case of shifting from status ③:
Main microcomputer: It issues the PON command to the Module microcomputer. It activates the PSW1 port to "L" (ON) in order to supply power to all the circuits in the MAIN Assy.
Module microcomputer: After receiving the PON command from the Main microcomputer, it activates the RELAY port to "H" (ON) in order to turn on the relay circuit in the POWER SUPPLY Unit and supply power to all the circuits in the DIGITAL Assy.
Transition to another mode:

- Unplugging of the AC power cord: Shifting to status ①
- Setting of the MAIN POWER switch to OFF: Shifting to status ①
- Setting of the POWER switch to OFF: Shifting to status ② via status ③.
- After a shutdown or power-down: Shifting to status ③


MAIN Assy
BLUE
RED
LED
IF μ-com
SW
ACTIVE
RS-232C Driver
Remote Control Receiver
Key Scan
Main μ-com
PON
Module μ-com
AC_DET
RST2
INV
Buf.
RST3
PSW1
RELAY
Relay
SW
PSW_DVI
RST4
DIGITAL Assy
DCDC Reg.
Reg.
RST2
DCDC Reg.
DVI
Video-SW RGB-SW
LVDS Tx FPGA MVDEC SVDEC AD HDMI DSEL IP MULTI
Audio SW
Amp.
Volume IC
Audio System Assy
SQ ASIC Victria LVDS_Rx
Drive System Assy
Address
Drive
Address Small Signal
Address Small Signal
Drive Reg.
STB3.3V STB5V
STB Power
AC Det.
AC Power
Small Signal Power
V+16.5V V+12V V+6.5V
Large Signal Power
VSUS VADR
SW
POWER SUPPLY Unit

10.2 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

Function:

To prevent a power-down from being generated, operation of only the digital-signal processing is enabled, and power is not supplied to the panel driving system (large-signal system).

Usage:

1. In a case where a check is required of signals' being correctly output to the driving systems during a repair, etc.
2. In a case where diagnosis is required for judging whether the power-down occurred in the large-signal system or small-signal system.

Procedures:

1. Set the slider switch on the 50FHD X DRIVE Assy (see Fig) to the far right position.
2. Issue the "DRV S00" RS-232C command. (To cancel, use the "DRV S01" command.)
   For details on how to issue an RS-232C command during Standby mode, see "About RS-232C commands during Standby mode," 9.1.1 DESCRIPTION OF RS-232C COMMAND."
3. Proceed as follows, using the remote control unit for servicing:

Press any key other than the Standby key during Standby mode.
(This is because the main microcomputer does not accept the first keypress.)

↓ (Within 10 seconds)

Press the DRIVE ON/OFF key.

↓ (Within 10 seconds)

Press the Standby key to start up the unit.

Notes:

- When the power to the large-signal system is off, as the PD signal is muted, power-downs other than PS_PD are not activated.
- Although the "DRV S00/S01" RS-232C commands are valid during Standby mode, once the main power is turned off, the unit will return to "DRV S01" (for canceling the function). Some special procedures are required.
  See "9.1.1 DESCRIPTION OF RS-232C COMMAND."
- To turn the drive off using the remote control unit for servicing, press the DRIVE ON/OFF key twice within 10 seconds, then within 10 seconds press the POWER key to turn the unit on.
- The remote control unit for servicing only turns off the drive but cannot turn it on.
- It is possible to turn the drive off (either by using the remote control unit for servicing or by issuing the appropriate RS-232C command) while the unit has a picture displayed. However, as it may damage the unit, turn the drive off during Standby mode activated using the remote control unit. (A power-down may occur.)
- NEVER turn on the large signal system by using the Drive OFF switch while the power is ON, as doing so would damage the unit.

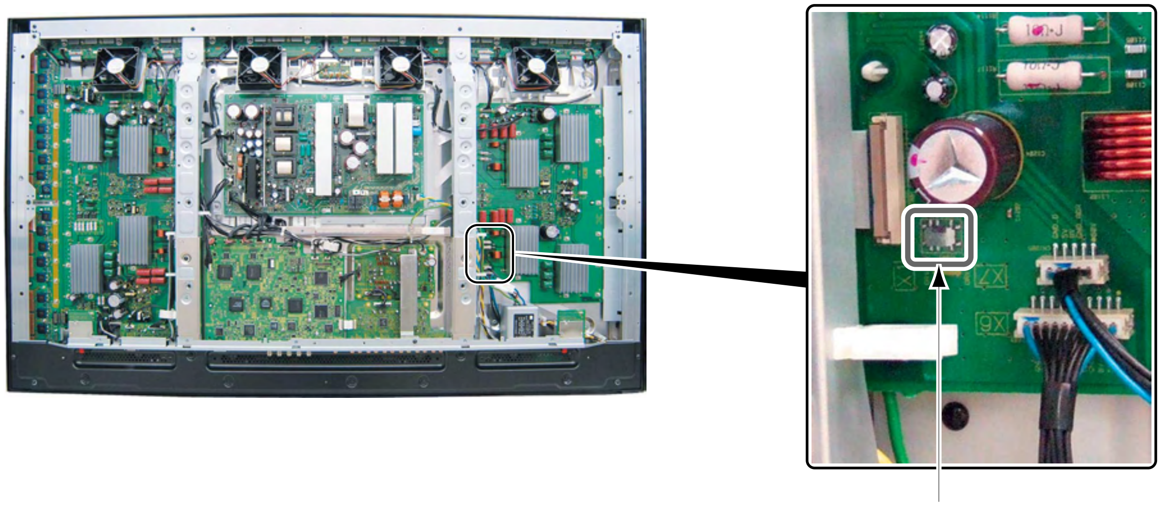
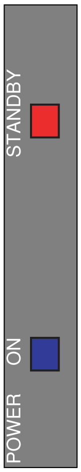
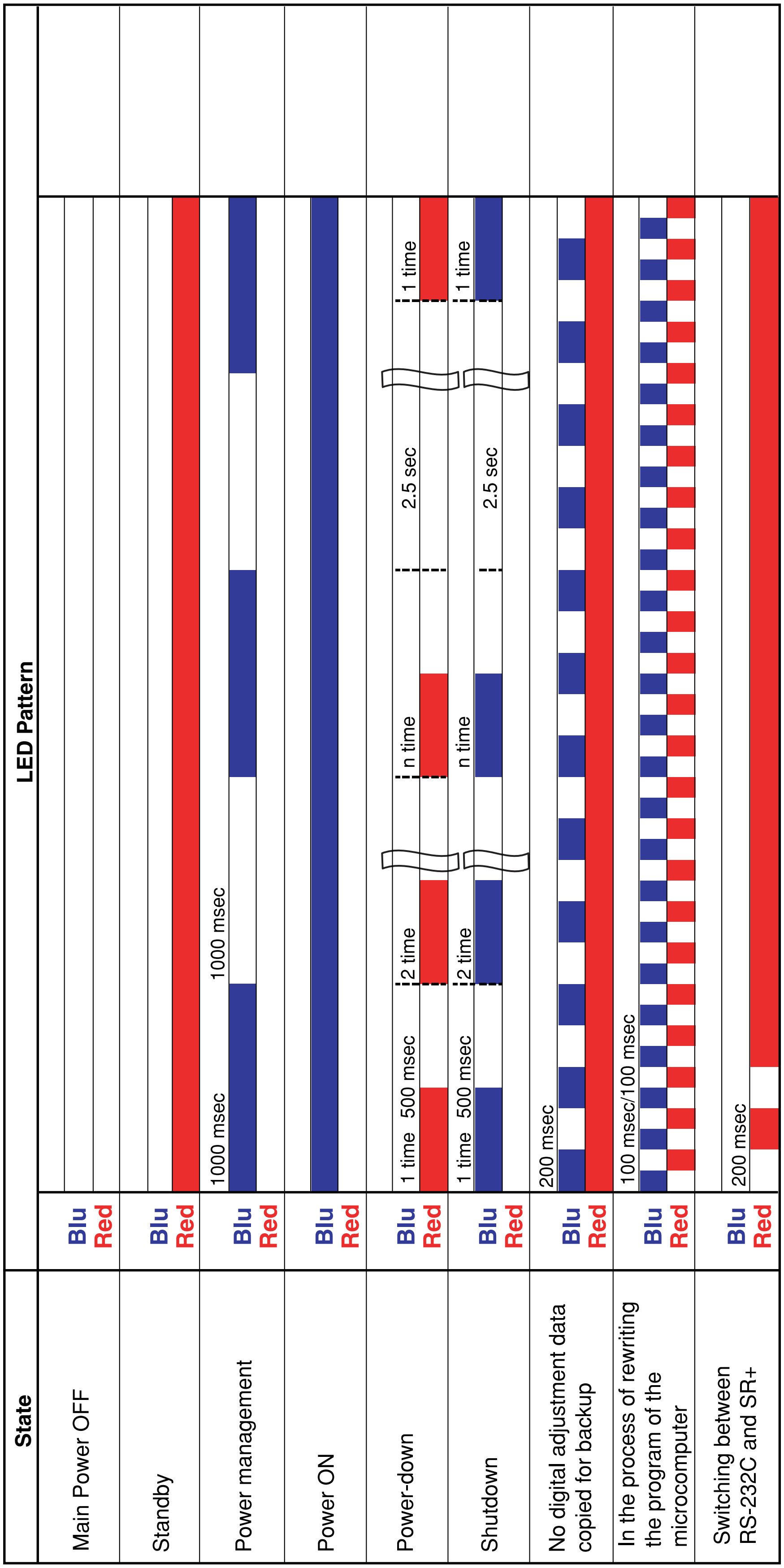


Fig. Drive OFF Position

10.3 LED INFORMATION

LED Pattern


POWER
ON
STANDBY

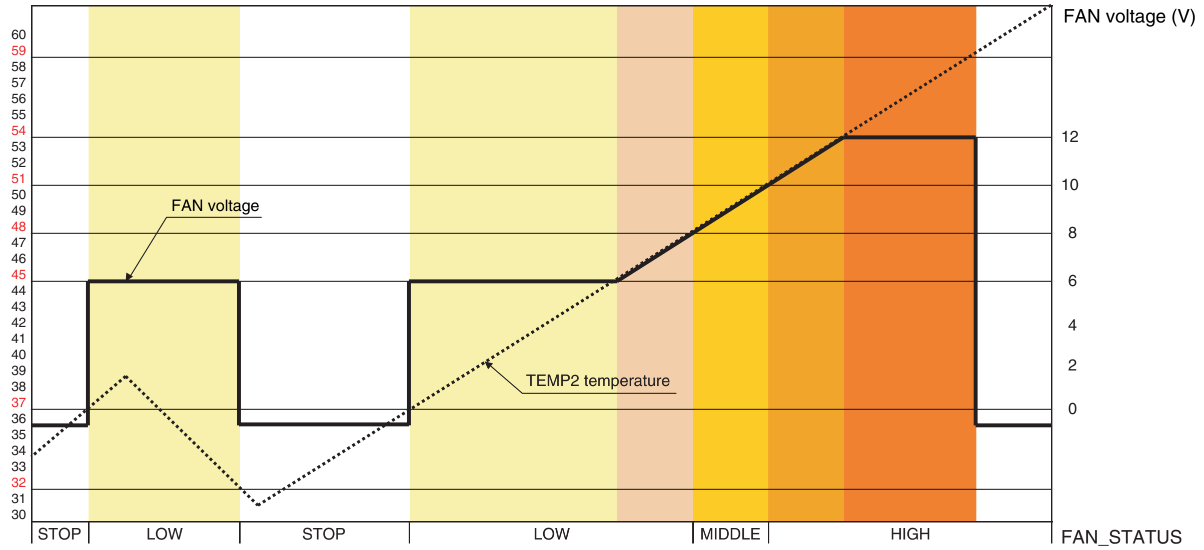

State
LED Pattern
Main Power OFF
Blu
Red
Standby
Blu
Red
Power management
Blu
Red
1000 msec
1000 msec
Power ON
Blu
Red
Power-down
Blu
Red
1 time
500 msec
2 time
n time
2.5 sec
1 time
Shutdown
Blu
Red
1 time
500 msec
2 time
n time
2.5 sec
1 time
No digital adjustment data copied for backup
Blu
Red
200 msec
In the process of rewriting the program of the microcomputer
Blu
Red
100 msec/100 msec
Switching between RS-232C and SR+
Blu
Red
200 msec

10.4 SPECIFICATIONS ON TEMPERATURE SENSOR DETECTION AND DRIVING OF THE FAN

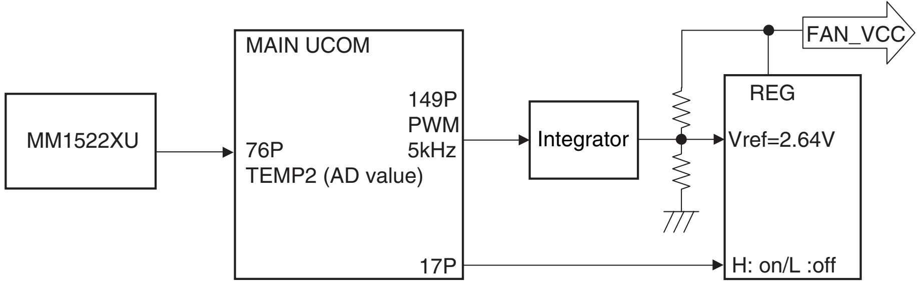
Specifications on temperature sensor detection and driving of the fan

- The power must be turned on or off with hysteresis.
- The measured value of the sensor inside the panel is indicated.
  According to where and how the unit is installed, there may be a difference between the measured sensor temperature and the ambient temperature.

[Reading of the sensor and driving of the fan]



[System block diagram]



[Conversion formulae]

TEMP2 (Celsius: C) = 0.32258 x A/D value (10 bit_data) - 52
TEMP2 (Fahrenheit: F) = 1.8 x TEMP2 (Celsius: C) + 32

[FAN_CONT operation]

OFF to ON: If the A/D value of the detected temperature is more than 275, the fan is turned on.
ON to OFF: If the A/D value of the detected temperature is less than 261, the fan is turned off.

[FAN_STATUS operation]

STOP: The fan is not activated if the A/D value of the detected temperature is less than 276.
The fan stops rotating if the A/D value of the detected temperature falls to below 261.
LOW: The fan starts rotating at a low speed if the A/D value of the detected temperature becomes 276 or more but 309 or less.
The rotation speed becomes low if the A/D value of the detected temperature falls to 261 or more but 309 or less.
MIDDLE: The fan starts rotating at a medium speed if the A/D value of the detected temperature becomes 310 or more but 319 or less.
HIGH: The fan starts rotating at a high speed if the A/D value of the detected temperature becomes 320 or more but 344 or less.

11. SPECIFICATIONS
11.1 MAIN SPECIFICATIONS

Number of Pixels		1920 x 1080 pixels
Audio Amplifier		13 W + 13 W (1 kHz, 10 %, 8 W)
Surround System		SRS/FOCUS/TruBass
Power Requirement		110 V to 240 V AC, 50 Hz/60 Hz, 420 W (0.4 W Standby)
Dimensions		1282 mm (W) x 750.5 mm (H) x 98 mm (D)
Weight		39.8 kg
Color System		PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
Terminals	INPUT1	DVI (DVI-D)
	INPUT2	HDMI*1
	INPUT3	HDMI*1
	INPUT4	BNC (COMPONENT VIDEO or ANALOG RGB)
	INPUT5	S-VIDEO
	INPUT6	VIDEO

*1 This conforms to HDMI1.1 and HDCP1.1.
HDMI (High Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable.
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

- Design and specifications are subject to change without notice.

Trademarks

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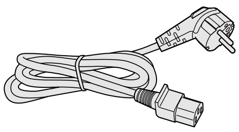
  FontAvenue is a registered trademark of NEC Corporation.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- The names of companies or institutions are trademarks or registered trademarks of the respective companies or institutions.

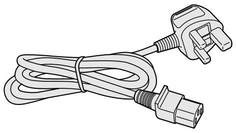
11.2 ACCESSORIES

● Accessories

• Power cord
(ADG1214)

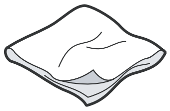


(For Europe, eccept UK and Eire)



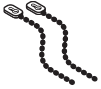
(For UK and Eire)

• Wiping cloth
(AED1285)

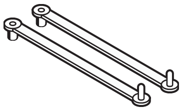


• Binder Assy (AEC1758)

Bead band × 2

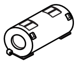


Speed clamp × 2

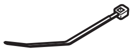


• Ferrite Core
(ATX1039)

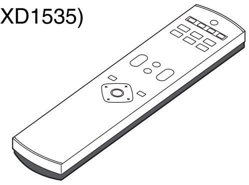
Ferrite Core



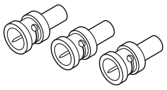
• Cable Tie



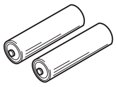
• Remote control unit
(AXD1535)



• BNC Conversion Connector
(AKX1052)

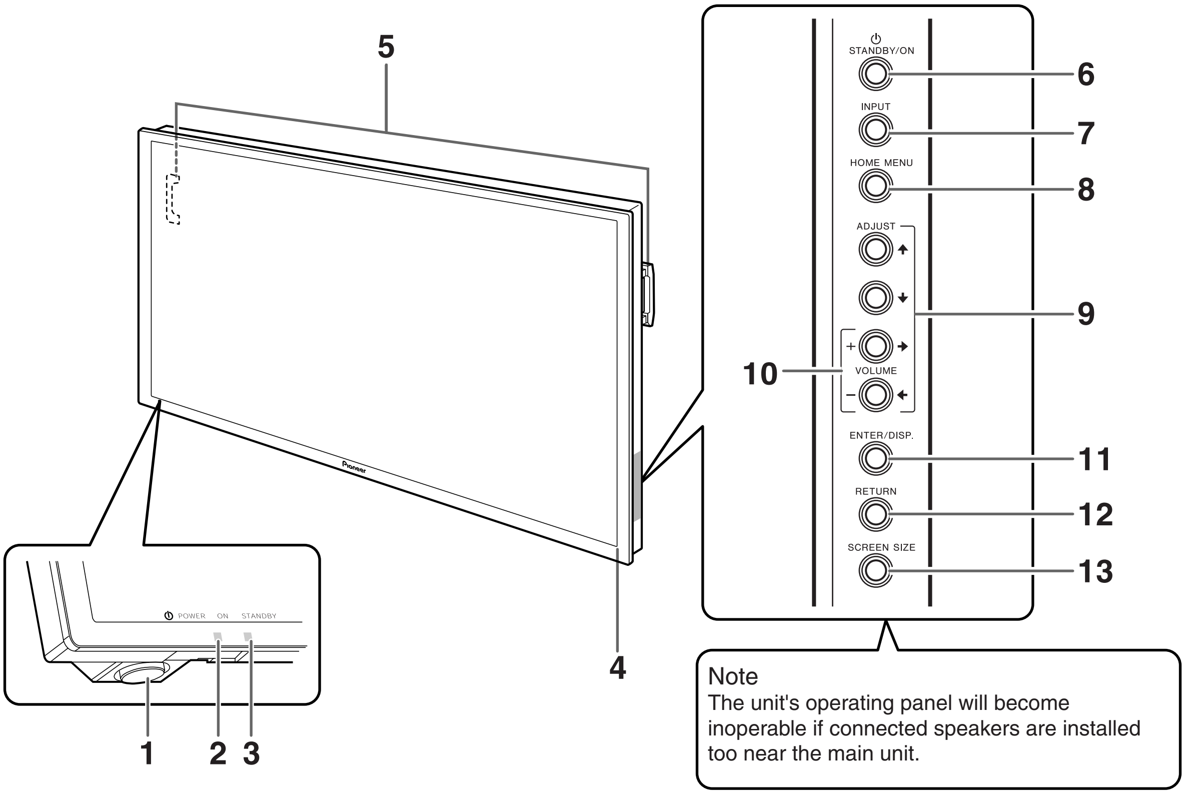


• AA size battery × 2
(Alkaline battery)
(VEM1031)



11.3 PANEL FACILITIES

- Main unit


5
STANDBY/ON
6
INPUT
7
HOME MENU
8
ADJUST
9
+
VOLUME
–
10
ENTER/DISP.
11
RETURN
12
SCREEN SIZE
13
POWER ON STANDBY
4
1
2
3

Note
The unit's operating panel will become inoperable if connected speakers are installed too near the main unit.

1 MAIN POWER switch
Use to switch the main power of the unit on and off.

2 ON indicator

3 STANDBY indicator

4 Remote control sensor

5 Handles

6 ⏻ STANDBY/ON button

7 INPUT button

8 HOME MENU button

9 ADJUST (↑/↓/→/←) buttons

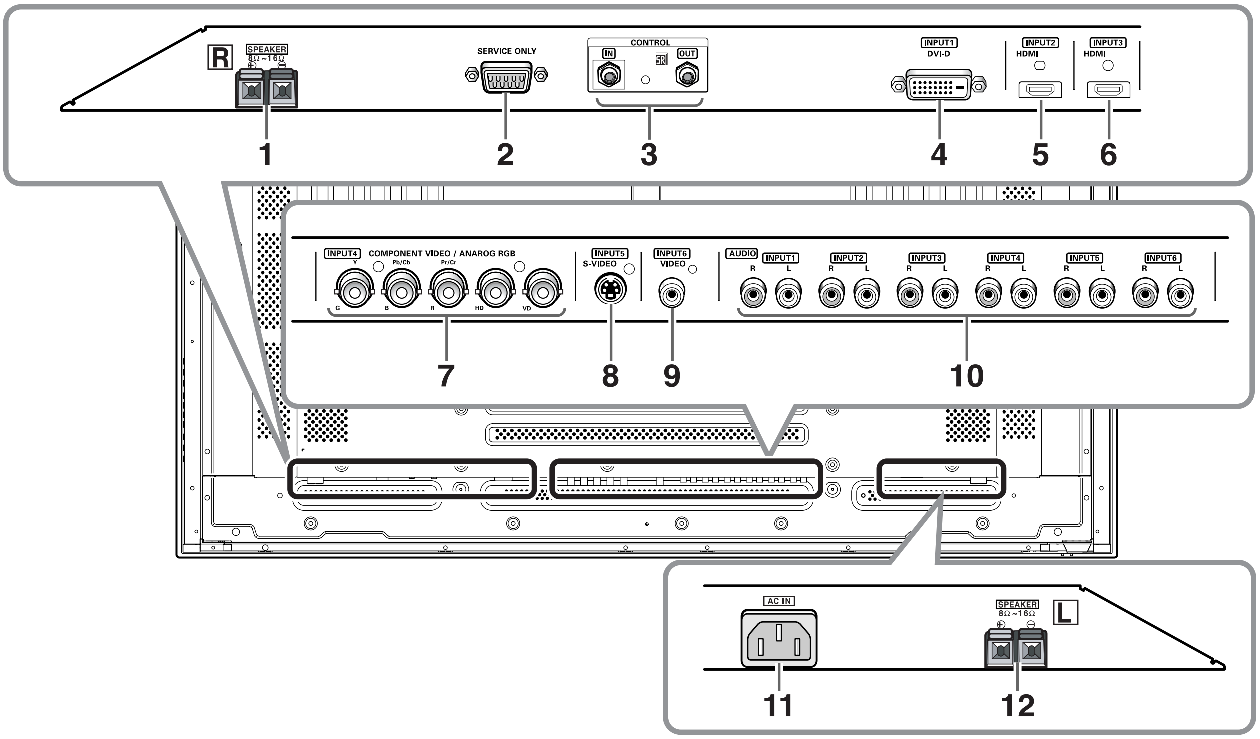
10 VOLUME +/- buttons

11 ENTER/DISP. button

12 RETURN button

13 SCREEN SIZE button

- **Connection panel**


R
SPEAKER
8Ω~16Ω
⊕ ⊖
SERVICE ONLY
CONTROL
IN
OUT
SR
INPUT1
DVI-D
INPUT2
HDMI
INPUT3
HDMI
1
2
3
4
5
6
INPUT4
COMPONENT VIDEO / ANAROG RGB
Y
Pb/Cb
Pr/Cr
G
B
R
HD
VD
INPUT5
S-VIDEO
INPUT6
VIDEO
AUDIO
INPUT1
INPUT2
INPUT3
INPUT4
INPUT5
INPUT6
R
L
7
8
9
10
AC IN
SPEAKER
8Ω~16Ω
⊕ ⊖
L
11
12

1 SPEAKER (R) terminals
For connection of an external right speaker.
Connect a speaker that has an impedance of 8 Ω to16 Ω.

2 Terminal for Service Adjustments (used for factory setup)
Never connect any component to these connectors without first consulting your Pioneer installation technician.
These connectors are used for Plasma Display setup adjustments.

3 CONTROL IN/OUT terminals

4 INPUT1 terminal (DVI-D)

5 INPUT2 terminal (HDMI)

6 INPUT3 terminal (HDMI)

7 INPUT4 terminals
(COMPONENT VIDEO: Y, Pb/Cb, Pr/Cr,
ANALOG RGB : G, B, R ,HD, VD)

8 INPUT5 terminal (S-VIDEO)
For connection of components that have an S-video output jack such as a decoder, VCR, game console or camcorder.

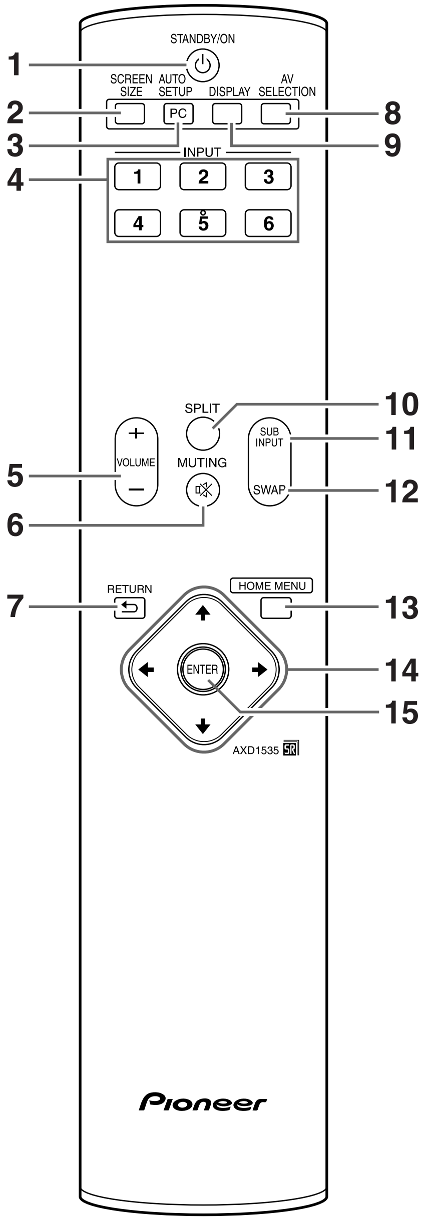
9 INPUT6 terminal (VIDEO)

10 AUDIO INPUT terminals
Audio input connectors corresponding to INPUT1 to INPUT6 video input connectors.

11 AC IN
Use to connect the supplied power cord to an AC outlet.

12 SPEAKER (L) terminals
For connection of an external left speaker. Connect a speaker that has an impedance of 8 Ω to 16 Ω.

- **Remote control unit**


STANDBY/ON
SCREEN SIZE
AUTO SETUP
PC
DISPLAY
AV SELECTION
INPUT
1
2
3
4
5
6
SPLIT
VOLUME
+
–
MUTING
SUB INPUT
SWAP
RETURN
HOME MENU
ENTER
AXD1535
Pioneer
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

1 STANDBY/ON button
Press to put the unit in operation or standby mode .

2 SCREEN SIZE button
Press to select the screen size .

3 PC AUTO SET UP button
When using computer signal input, automatically sets the "Position", "Clock" and "Phase" to optimum values .

4 INPUT 1 to **6** buttons
Press to select the input.

5 VOLUME (**+**/**–**) buttons
Use to adjust the volume .

6 MUTING button
Press to mute the volume.

7 RETURN button
Restores the previous menu screen.

8 AV SELECTION button
Use to select the AV function .

9 DISPLAY button
Press to view the unit's current input and setup mode.

10 SPLIT button
Press to switch to multi-screen display.

11 SUB INPUT button
During multi-screen display, use this button to change inputs to subscreens .

12 SWAP button
During multi-screen display, use this button to switch between main screen and subscreen .

13 HOME MENU button
Press to open and close the on-screen menu .

14 ADJUST (**⬆**/**⬇**/**⬅**/**➡**) buttons
Use to navigate menu screens and to adjust various settings on the unit.

15 ENTER button
Press to adjust or enter various settings on the unit .

12. IC INFORMATION

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

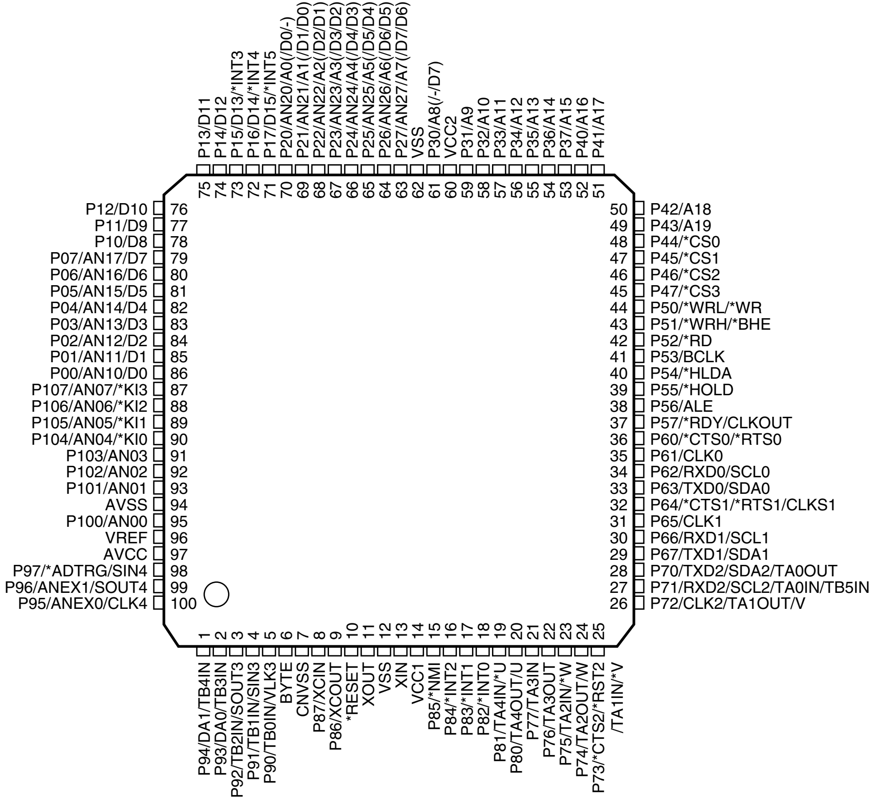
● List of IC

AGC1015, CY25561SXC, PEE004A, THC63LVD104S, AGC1005, AXY1136, EP2C20F484C8N, MB91305PMC-G-BND
SII9023CTU-K, NJU26901E2, AXF1159, AXF1160, AXF1161

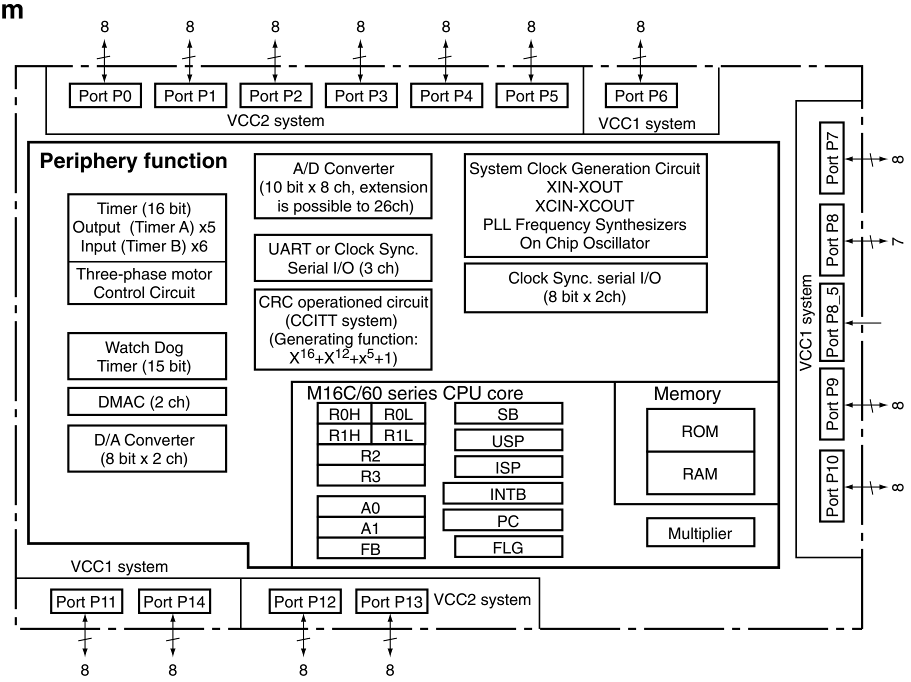
■ AGC1015 (FHD DIGITAL ASSY: IC3703)

- Module Microcomputer

● Pin Arrangement (Top view)


75 P13/D11
74 P14/D12
73 P15/D13/*INT3
72 P16/D14/*INT4
71 P17/D15/*INT5
70 P20/AN20/A0/(D0/-)
69 P21/AN21/A1/(D1/D0)
68 P22/AN22/A2/(D2/D1)
67 P23/AN23/A3/(D3/D2)
66 P24/AN24/A4/(D4/D3)
65 P25/AN25/A5/(D5/D4)
64 P26/AN26/A6/(D6/D5)
63 P27/AN27/A7/(D7/D6)
62 VSS
61 P30/A8(/-/D7)
60 VCC2
59 P31/A9
58 P32/A10
57 P33/A11
56 P34/A12
55 P35/A13
54 P36/A14
53 P37/A15
52 P40/A16
51 P41/A17
76 P12/D10
77 P11/D9
78 P10/D8
79 P07/AN17/D7
80 P06/AN16/D6
81 P05/AN15/D5
82 P04/AN14/D4
83 P03/AN13/D3
84 P02/AN12/D2
85 P01/AN11/D1
86 P00/AN10/D0
87 P107/AN07/*KI3
88 P106/AN06/*KI2
89 P105/AN05/*KI1
90 P104/AN04/*KI0
91 P103/AN03
92 P102/AN02
93 P101/AN01
94 AVSS
95 P100/AN00
96 VREF
97 AVCC
98 P97/*ADTRG/SIN4
99 P96/ANEX1/SOUT4
100 P95/ANEX0/CLK4
50 P42/A18
49 P43/A19
48 P44/*CS0
47 P45/*CS1
46 P46/*CS2
45 P47/*CS3
44 P50/*WRL/*WR
43 P51/*WRH/*BHE
42 P52/*RD
41 P53/BCLK
40 P54/*HLDA
39 P55/*HOLD
38 P56/ALE
37 P57/*RDY/CLKOUT
36 P60/*CTS0/*RTS0
35 P61/CLK0
34 P62/RXD0/SCL0
33 P63/TXD0/SDA0
32 P64/*CTS1/*RTS1/CLKS1
31 P65/CLK1
30 P66/RXD1/SCL1
29 P67/TXD1/SDA1
28 P70/TXD2/SDA2/TA0OUT
27 P71/RXD2/SCL2/TA0IN/TB5IN
26 P72/CLK2/TA1OUT/V
1 P94/DA1/TB4IN
2 P93/DA0/TB3IN
3 P92/TB2IN/SOUT3
4 P91/TB1IN/SIN3
5 P90/TB0IN/VLK3
6 BYTE
7 CNVSS
8 P87/XCIN
9 P86/XCOUT
10 *RESET
11 XOUT
12 VSS
13 XIN
14 VCC1
15 P85/*NMI
16 P84/*INT2
17 P83/*INT1
18 P82/*INT0
19 P81/TA4IN/*U
20 P80/TA4OUT/U
21 P77/TA3IN
22 P76/TA3OUT
23 P75/TA2IN/*W
24 P74/TA2OUT/W
25 P73/*CTS2/*RST2/TA1IN/*V

● Block Diagram


8
Port P0
Port P1
Port P2
Port P3
Port P4
Port P5
Port P6
VCC2 system
VCC1 system
Periphery function
Timer (16 bit)
Output (Timer A) x5
Input (Timer B) x6
Three-phase motor Control Circuit
Watch Dog Timer (15 bit)
DMAC (2 ch)
D/A Converter (8 bit x 2 ch)
A/D Converter (10 bit x 8 ch, extension is possible to 26ch)
UART or Clock Sync. Serial I/O (3 ch)
CRC operationed circuit (CCITT system) (Generating function: X16+X12+x5+1)
System Clock Generation Circuit
XIN-XOUT
XCIN-XCOUT
PLL Frequency Synthesizers
On Chip Oscillator
Clock Sync. serial I/O (8 bit x 2ch)
M16C/60 series CPU core
R0H
R0L
R1H
R1L
R2
R3
A0
A1
FB
SB
USP
ISP
INTB
PC
FLG
Memory
ROM
RAM
Multiplier
VCC1 system
Port P7
Port P8
Port P8_5
Port P9
Port P10
7
VCC1 system
Port P11
Port P14
Port P12
Port P13
VCC2 system

● Pin Function

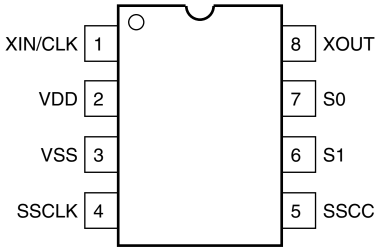
No.	Mark	Pin Name	I/O	Active	Pin Function
1	P94/DA1/TB4IN	V_SYNC	I	L	V sync distinction
2	P93/DA0/TB3IN	–	O		
3	P92/TB2IN/SOUT3	TXD_SQ	O		Serial communication with SQ IC (IC3201 and IC3301) Data transmission
4	P91/TB1IN/SIN3	RXD_AL	I	–	Serial communication with SQ IC (IC3201) Data reception
5	P90/TB0IN/VLK3	CLK_SQ	O		Serial communication with SQ IC (IC3201 and IC3301) Clock output
6	BYTE	BYTE	I		(GND connection)
7	CNVSS	CNVSS	I		For processor mode setting
8	P87/XCIN	–	O		
9	P86/XCOUT	–	O		
10	*RESET	RST_MD	I	L	Reset input
11	XOUT	XOUT	O		Output for main clock
12	VSS	VSS	–		GND
13	XIN	XIN	I		Input for main clock
14	VCC1	VCC1	–		STB3.3V
15	P85/*NMI	NMI	I		(Pull-up with power)
16	P84/*INT2	–	O		
17	P83/*INT1	AEM_SQ	I	H	Address emergency input
18	P82/*INT0	RST2	I	L	Reset detection of SQ IC (IC3201 and IC3301)
19	P81/TA4IN/*U	STOP_AR	I	H	Drive stopping monitor of SQ IC (IC3301)
20	P80/TA4OUT/U	AR_FUT	I	H	(Reserved) Input for SQ IC (IC3301)
21	P77/TA3IN	STOP_AL	I	H	Drive stopping monitor of SQ IC (IC3201)
22	P76/TA3OUT	–	O		
23	P75/TA2IN/*W	–	O		
24	P74/TA2OUT/W	–	O		
25	P73/*CTS2/*RST2/TA1IN/*V	–	O		
26	P72/CLK2/TA1OUT/V	EEPRST	O	H	EEPROM power SW
27	P71/RXD2/SCL2/TA0IN/TB5IN	E_SCL	O		IIC clock output for EEPROM
28	P70/TXD2/SDA2/TA0OUT	E_SDA	I/O		IIC data input/output for EEPROM
29	P67/TXD1/SDA1	TXD	O		Communication with flash ROM writer Data transmission
30	P66/RXD1/SCL1	RXD	I		Communication with flash ROM writer Data reception
31	P65/CLK1	SCLK	I		Communication with flash ROM writer Clock input
32	P64/*CTS1/*RTS1/CLKS1	BUSY	O		Communication with flash ROM writer busy output
33	P63/TXD0/SDA0	RXD_MD	O		UART communication with main microcomputer Data transmission
34	P62/RXD0/SCL0	TXD_MD	I		UART communication with main microcomputer Data reception
35	P61/CLK0	AL_FUT	I	H	(Reserved) Input for SQ IC (IC3201)
36	P60/*CTS0/*RTS0	REQ_MD	O	H	Communication request to the main microcomputer
37	P57/*RDY/CLKOUT	INP_MUTE	O	L	Output mute of LVDS receiver
38	P56/ALE	–	O		
39	P55/*HOLD	EPM	I		Flash rewriting mode setting (pull-down)
40	P54/*HLDA	DRF_B	O	L	High power system OFF
41	P53/BCLK	RELAY	O	H	Power ON control
42	P52/*RD	–	O		
43	P51/*WRH/*BHE	–	O		
44	P50/*WRL/*WR	CE	I		Flash rewriting mode setting (pull-up)
45	P47/*CS3	MODEL	I	–	Product distinction (FHD: L)
46	P46/*CS2	SCL	O		IIC clock output for DAC
47	P45/*CS1	SDA	I/O		IIC data input/output for DAC
48	P44/*CS0	PD_MUTE_B	O	L	Power down mute
49	P43/A19	LED_B	O	L	Power ON/SD information (For Assy)
50	P42/A18	LED_R	O	L	Power STBY/PD information (For Assy)

No.	Mark	Pin Name	I/O	Active	Pin Function
51	P41/A17	H_DET_B	I	L	H existence distinction
52	P40/A16	AL_SEL	O	H	UART switch (For IC3201 selection)
53	P37/A15	RST_SQ	O	L	SQ IC (IC3201 and IC3301) forced reset
54	P36/A14	CE_SQ	O	L	Enable for SQ IC (IC3201 and IC3301) communication
55	P35/A13	BUSY_SQ	I	H	Busy for SQ IC (IC3201 and IC3301) communication
56	P34/A12	–	O		
57	P33/A11	–	O		
58	P32/A10	AR_SEL	O	H	UART switch (For IC3301 selection)
59	P31/A9	WE_SQ	O	H	Switching signal of Flash rewriting path for SQ IC
60	VCC2	VCC2	–		STB 3.3 V
61	P30/A8(/-/D7)	PD_TRG	I	L	EXT_PD confirmation
62	VSS	GND	–		GND
63	P27/AN27/A7(/D7/D6)	SCAN_PD	I	H	SCAN decrease voltage PD
64	P26/AN26/A6(/D6/D5)	YDRV_PD	I	H	Y drive PD
65	P25/AN25/A5(/D5/D4)	YSUS_PD	I	H	Y-SUS PD
66	P24/AN24/A4(/D4/D3)	YDCDC_PD	I	H	DCDC converter PD of Y drive
67	P23/AN23/A3(/D3/D2)	SCN5V_PD	I	H	SCAN5V decrease voltage PD
68	P22/AN22/A2(/D2/D1)	XSUS_PD	I	H	X-SUS PD
69	P21/AN21/A1(/D1/D0)	XDCDC_PD	I	H	DCDC converter PD of X drive
70	P20/AN20/A0(/D0/-)	XDRV_PD	I	H	X drive PD
71	P17/D15/*INT5	–	I		
72	P16/D14/*INT4	–	I		
73	P15/D13/*INT3	AC_DET	I	L	AC power monitor
74	P14/D12	PBF	I		Panel distinction of High-efficiency/Conventional (FHD: L)
75	P13/D11	–	I		
76	P12/D10	–	I		
77	P11/D9	–	I		
78	P10/D8	–	I		
79	P07/AN17/D7	ADRS_PD	I	H	Address PD
80	P06/AN16/D6	–	I		
81	P05/AN15/D5	–	I		
82	P04/AN14/D4	SS_MODE	O	L	SSCG operation L: SSCG ON, H: SSCG OFF
83	P03/AN13/D3	R_SQ_NON	I	H	Drive stop detection of SQ IC (IC3301)
84	P02/AN12/D2	DDC_PD	I	H	DCDC converter PD
85	P01/AN11/D1	PS_PD	I	H	PD in the POWER SUPPLY Unit
86	P00/AN10/D0	L_SQ_NON	I	H	Drive stop detection of SQ IC (IC3201)
87	P107/AN07/*KI3	OFF_DET_AR	O	L	Drive stop output to SQ IC (IC3301)
88	P106/AN06/*KI2	DL_FIN_AR	I	H	Rewriting completion signal of SQ IC (IC3301)
89	P105/AN05/*KI1	OFF_DET_AL	O	L	Drive stop output to SQ IC (IC3201)
90	P104/AN04/*KI0	DL_FIN_AL	I	H	Rewriting completion signal of SQ IC (IC3201)
91	P103/AN03	–	O		
92	P102/AN02	TEMP1	I	–	Panel temperature sensor input
93	P101/AN01	MODE	I	–	Assy operation mode setting
94	AVSS	GND	I		GND
95	P100/AN00	PSIZE	I	L	G7 size distinction (FHD: L)
96	VREF	VREF	I	–	Reference voltage for A/D input
97	AVCC	AVCC	I		STB 3.3 V
98	P97/*ADTRG/SIN4	RXD_AR	I	L	Serial communication with SQ IC (IC3301) Data reception
99	P96/ANEX1/SOUT4	–	O		
100	P95/ANEX0/CLK4	CLK_SQ	I		Serial communication with SQ IC (IC3201 and IC3301) Clock input

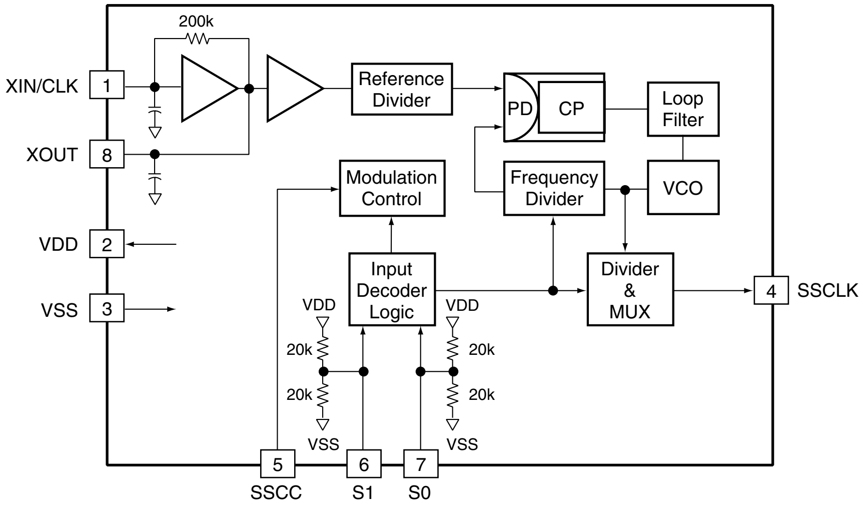
■ CY25561SXC (FHD DIGITAL ASSY: IC3401)

- SSCG IC

● Pin Arrangement (Top view)


XIN/CLK 1
VDD 2
VSS 3
SSCLK 4
8 XOUT
7 S0
6 S1
5 SSCC

● Block Diagram


200k
XIN/CLK 1
XOUT 8
VDD 2
VSS 3
Reference Divider
PD
CP
Loop Filter
Modulation Control
Frequency Divider
VCO
Input Decoder Logic
Divider & MUX
4 SSCLK
VDD
20k
20k
VSS
VDD
20k
20k
VSS
5 SSCC
6 S1
7 S0

● Pin Function

No.	Pin Name	I/O	Pin Function
1	XIN/CLK	I	Oscillator input/clock input
2	VDD	–	Power supply
3	VSS	–	Ground
4	SSCLK	O	SSCG clock output
5	SSCC	I	SSCG function ON/OFF input L: Disable, H: Enable
6	S1	I	Modulation frequency and band width select
7	S0	I	Modulation frequency and band width select
8	XOUT	O	Oscillator output

PEE004A (FHD DIGITAL ASSY: IC3101)

- LSI for PDP Video Processing (Sequence Processor)

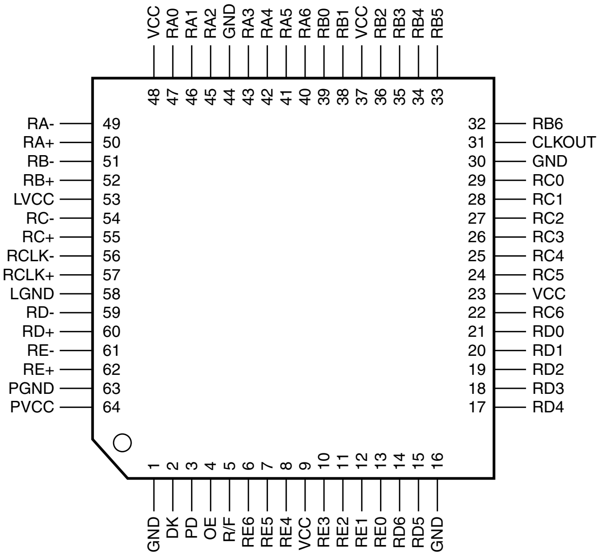
● Pin Arrangement (Top view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	GND	OVDDW	THRA6	THRA7	THRA9	AL_EXA19	AL_EXA15	AL_EXA11	AL_EXA9	AL_EXA7	AL_EXA3	KME_TEST	AL_EXDIO0	AL_EXDIO10	AL_EXDIO12	AL_EXDIO6	AL_EXDIO15	AL_DCLK	AL_RA9	AL_RA6	OVDDW	GND
B	OVDDW	GND	DLL MODE0	THRA8	AL_CSCSN2	TRST	AL_EXA16	AL_EXA12	AL_EXA0	AL_EXA8	AL_EXA4	NC	AL_EXA2	AL_EXDIO2	AL_EXDIO4	AL_EXDIO13	AL_EXDIO7	AL_CSRD_N	AL_HDI	AL_RA7	GND	OVDDW
C	THRA3	THRA2	NC	NC	GND	OVDDW	GND	GND	AL_EXA1	GND	IVDDW	OVDDW	GND	AL_EXDIO9	GND	GND	AL_EXDIO14	NC	AL_VDI	AL_RA8	AL_RA5	AL_RA4
D	THGA8	THGA7	NC	NC	NC	NC	AL_EXA17	AL_EXA13	AL_EXA10	GND	AL_EXA5	NC	GND	AL_EXDIO1	AL_EXDIO11	AL_EXDIO5	OVDDW	GND	AL_DEI	AL_RA3	AL_RA2	AL_RA1
E	THGA2	THGA1	THRA5	THRA4	CVDD	CVDD	AL_EXA18	AL_EXA14	AL_CSWR_N	OVDDW	AL_EXA6	NC	OVDDW	AL_EXDIO8	AL_EXDIO3	GND	GND	NC	NC	AL_THEATER	AL_RA0	AL_GA9
F	THGA0	THBA9	THGA9	GND	GND	GND	GND	RXD_SQ	CSIOTXD_SEL	AL_GPIO2	AL_GPIO1	AL_GPIO0	AL_UARTRXD	AL_UARTTXD	AL_TRNSENDO	CVDD	CVDD	GND	GND	AL_APLDT	AL_GA8	AL_GA7
G	THBA8	THBA7	THGA6	GND	THRA0	THRA1	CVDD	CVDD	OVDDW	GND	GND	CVDD	GND	OVDDW	GND	CVDD	AL_TRNSENDI	AL_GA6	OVDDW	GND	AL_GA5	AL_GA4
H	THBA4	THBA3	GND	THGA5	THGA4	THGA3	CVDD	CVDD	GND	GND	GND	CVDD	CVDD	GND	GND	CVDD	CON_R	AL_GA3	AL_GA2	GND	AL_GA1	AL_GA0
J	THBA0	TH THEATER	THBA2	THBA1	THBA5	THBA6	OVDDW	GND	GND	CVDD	CVDD	CVDD	CVDD	GND	GND	OVDDW	CON_L	AL_BA9	AL_BA8	AL_BA7	AL_BA6	AL_BA5
K	NC	TCK	GND	NC	TDI	TMS	GND	CVDD	CVDD	GND	GND	GND	GND	CVDD	GND	GND	AL_CSIOTXD	AL_BA4	GND	GND	AL_BA3	AL_BA2
L	GNDP	VDDP	OVDDW	NC	TDO	NC	CVDD	CVDD	CVDD	GND	GND	GND	GND	CVDD	GND	CVDD	AR_CSIOTXD	NC	AL_BA1	IVDDW	CLKS	NC
M	THL_CLK	THR_CLK	IVDDW	GND	TH APLDT	F_THVD2	GND	GND	CVDD	GND	GND	GND	GND	CVDD	CVDD	GND	NC	PLL BYPASS	AL_BA0	OVDDW	NC	NC
N	F_THDE1	F_THHD1	THRB8	THRB7	THRB9	F_THHD2	GND	GND	CVDD	GND	GND	GND	GND	CVDD	CVDD	GND	NC	NC	GND	NC	AR_CSCSN2	AR_EXA19
P	F_THVD1	F_THDE2	GND	THRB0	THRB6	THRB5	OVDDW	GND	GND	CVDD	CVDD	CVDD	CVDD	CVDD	GND	OVDDW	UART TXD	PLLEN	AR_EXA15	AR_EXA16	AR_EXA17	AR_EXA18
R	THRB4	THRB3	GND	THGB9	THGB6	THGB5	CVDD	CVDD	GND	CVDD	GND	CVDD	GND	GND	CVDD	CVDD	UART RXD	AR_EXA11	AR_EXA12	GND	AR_EXA13	AR_EXA14
T	THRB2	THRB1	THGB0	OVDDW	THGB2	THGB1	CVDD	CVDD	OVDDW	GND	GND	CVDD	GND	OVDDW	CVDD	GND	GND	NC	OVDDW	GND	AR_EXA1	AR_EXA10
U	THGB8	THGB7	GND	NC	GND	CVDD	CVDD	AR_TRNSENDI	AR_TRNSENDO	AR_UARTRXD	CLK FBOUT	CLK FBIN	AR_GPIO0	AR_GPIO1	AR_GPIO2	CVDD	CVDD	NC	AR_CSWR_N	GND	AR_EXA9	AR_EXA0
V	THGB4	THGB3	GND	NC	GND	GND	GND	AR_GB2	AR_APLDT	OVDDW	AR_UARTTXD	NC	OVDDW	AR_HDI	AR_CSRD_N	GND	GND	GND	NC	AR_EXA6	AR_EXA7	AR_EXA8
W	THBB9	THBB8	THBB5	THBB3	THBB0	OVDDW	AR_BB9	AR_GB3	AR_THEATER	GND	AR_RB1	CLKD	GND	AR_VDI	AR_EXDIO15	AR_EXDIO14	OVDDW	AR_EXDIO12	GND	NC	AR_EXA4	AR_EXA5
Y	THBB7	THBB6	THBB2	THBB1	AR_BB3	AR_BB6	GND	GND	AR_GB6	GND	OVDDW	IVDDW	GND	AR_DEI	GND	GND	AR_EXDIO5	AR_EXDIO4	AR_EXDIO10	AR_EXDIO1	AR_EXA3	AR_EXA2
AA	OVDDW	GND	THBB4	AR_BB1	AR_BB4	AR_BB7	AR_GB0	AR_GB4	AR_GB7	AR_GB9	AR_RB2	AR_RB4	AR_RB6	AR_RB8	AR_EXDIO7	AR_EXDIO6	ARST_N	AR_EXDIO11	AR_EXDIO2	AR_EXDIO8	GND	OVDDW
AB	GND	OVDDW	AR_BB0	AR_BB2	AR_BB5	AR_BB8	AR_GB1	AR_GB5	AR_GB8	AR_RB0	AR_RB3	AR_RB5	AR_RB7	AR_RB9	AR_DCLK	AR_EXDIO13	RESETX	AR_EXDIO3	AR_EXDIO9	AR_EXDIO0	OVDDW	GND

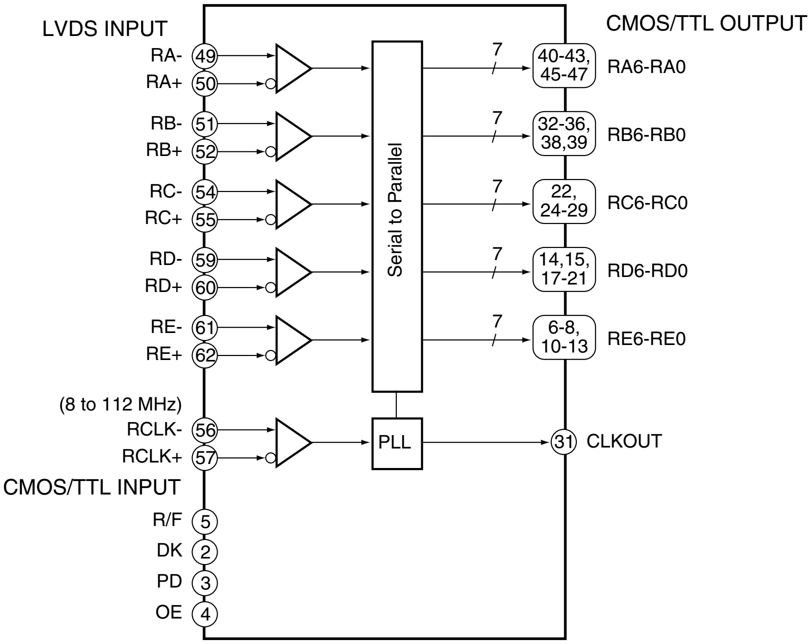
THC63LVD104S (FHD DIGITAL ASSY: IC3001, IC3002)

- LVDS Receiver IC

Pin Arrangement (Top view)


VCC 48
RA0 47
RA1 46
RA2 45
GND 44
RA3 43
RA4 42
RA5 41
RA6 40
RB0 39
RB1 38
VCC 37
RB2 36
RB3 35
RB4 34
RB5 33
RA- 49
RA+ 50
RB- 51
RB+ 52
LVCC 53
RC- 54
RC+ 55
RCLK- 56
RCLK+ 57
LGND 58
RD- 59
RD+ 60
RE- 61
RE+ 62
PGND 63
PVCC 64
32 RB6
31 CLKOUT
30 GND
29 RC0
28 RC1
27 RC2
26 RC3
25 RC4
24 RC5
23 VCC
22 RC6
21 RD0
20 RD1
19 RD2
18 RD3
17 RD4
1 GND
2 DK
3 PD
4 OE
5 R/F
6 RE6
7 RE5
8 RE4
9 VCC
10 RE3
11 RE2
12 RE1
13 RE0
14 RD6
15 RD5
16 GND

Block Diagram


LVDS INPUT
RA- 49
RA+ 50
RB- 51
RB+ 52
RC- 54
RC+ 55
RD- 59
RD+ 60
RE- 61
RE+ 62
(8 to 112 MHz)
RCLK- 56
RCLK+ 57
CMOS/TTL INPUT
R/F 5
DK 2
PD 3
OE 4
Serial to Parallel
PLL
CMOS/TTL OUTPUT
7
40-43, 45-47 RA6-RA0
32-36, 38,39 RB6-RB0
22, 24-29 RC6-RC0
14,15, 17-21 RD6-RD0
6-8, 10-13 RE6-RE0
31 CLKOUT

■ AGC1005 (FHD MAIN ASSY: IC4803)

- IF Microcomputer

● Pin Function

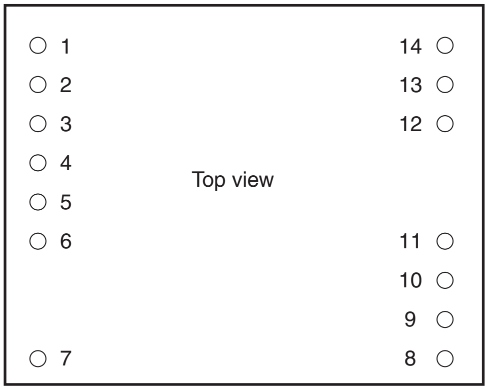
No.	Mark	Pin Name	I/O	Pin Function	Active
1	PB6/AN6	PD5	I	Writing detection input of the master microcomputer (WD_MTR) old PN2	H
2	PB7/AN7			N.C.	
3	AVcc		I	Power supply STB3.3 V	
4	X2		O	Output for sub clock (32.768 kHz) Set to open when do not use.	
5	X1		I	Input for sub clock Connect to VCL or VSS (GND) when do not use.	
6	Vcl			Internal voltage drop power supply (0.1µF)	
7	*RES	RST	I	Reset input	L
8	TEST		I	Normally pull-down (H input when writing with the writer mode)	
9	Vss		I	GND	
10	OSC2		O	Output for main clock	
11	OSC1		I	Input for main clock	
12	Vcc		I	Power supply STB3.3 V	
13	P50/*WKP0	AC_OFF	I	AC off detection of P side in two units. (from MDR)	H
14	P51/*WKP1	AC_DET	I	N.C.	H
15	P34	EXP_A4	I	SCDT, DVI sync ditekuto	
16	P35	EXP_A5	O	DVI_PS, DVI power save	
17	P36	EXP_A6	O	EDID_SEL, DVI EDIT select	
18	P37	EXP_A7		N.C.	
19	P52/*WKP2	CE_IF	I	Chip enable for Ucom communication at the master side	L
20	P53/*WKP3	RST_MTR	O	Reset signal output of the Ucom at the master side	L
21	P54/*WKP4	PON_TRG	I	N.C.	L
22	P55/*WKP5/*ADTRG	REQ_IF		Communication request to the Ucom at the master side	H
23	P10/TMOW	BUSY_IF	O	Communication inhibit to the Ucom at the master side	H
24	P11/PWM	EXP_B0		N.C.	
25	P12	WE_MTR	O	For rewriting of the other flash by the external PC	H
26	P56/SDA	SDA_IF	I/O	N.C.	L
27	P57/SCL	SCL_IF	O	N.C.	L
28	P74/TMRIV	EXP_B1		N.C.	
29	P75/TMCIV	EXP_B2		N.C.	
30	P76/TMOV	EXP_B3		N.C.	
31	P24	AV_LINK_OUT	O	N.C.	H
32	P63/FTIOD0	LED_3	O	N.C.	L
33	P62/FTIOC0	LED_2	O	For logotype mark	L
34	P61/FTIOB0	LED_1	O	For power ON (blue) LED_ON	L
35	*NMI		I	L setting at writing in the boot mode (Normally pull-up)	
36	P60/FTIOA0	LED_0	O	For power OFF (red) LED_OFF	L
37	P64/FTIOA1	EXP_B4		N.C.	
38	P65/FTIOB1	EXP_B5		N.C.	
39	P66/FTIOC1	EXP_B6		N.C.	
40	P67/FTIOD1	EXP_B7		N.C.	
41	P85		I	H setting at writing in the boot mode	
42	P86			For emulator	
43	P87			For emulator	
44	P20/SCK3	SCK	I	Clock for ROM writer writing	L
45	P21/RXD	RXD	I	Reception data line of RS-232C for user/ For ROM writer writing	L

No.	Mark	Pin Name	I/O	Pin Function	Active
46	P22/TXD	TXD	O	Transmission data line of RS-232C for user/ For ROM writer writing	L
47	P23	ACTIVE	O	Power supply for the master side Ucom ON/OFF	H
48	P70/SCK3_2	CLK_IF	I	Clock input for the master side Ucom	L
49	P71/RXD_2	RXD_IF	I	Reception data for the master side Ucom	L
50	P72/TXD_2	TXD_IF	O	Transmission data for the master side Ucom	L
51	P14/*IRQ0	KEY_SCAN	I	KEY code input	L
52	P15/*IRQ1/TMIB1	SR_IN	I	Remote control code input (Integrated unit: directly, Separate unit: use MDR cable)	L
53	P16/*IRQ2	AV_LINK_IN	I	N.C.	L
54	P17/*IRQ3/TRGV	SR_EN_B		SR_EN_B	
55	P33	EXP_A3		N.C.	
56	P32	EXP_A2		N.C.	
57	P31	EXP_A1	Hold	N.C.	
58	P30	EXP_A0		N.C.	
59	PB3/AN3	232C_DET	I	232C_DET	H
60	PB2/AN2	TEST1	I	Operation mode switch for Assy checker (H: NORMA, L: Assy unit, M: Port check)	–
61	PB1/AN1		I	N.C.	–
62	PB0/AN0	KEY_ST	I	KEY(A/D) setting	–
63	PB4/AN4	KEY_AD1	I	Key voltage input of KEY(A/D)1	–
64	PB5/AN5	KEY_AD2	I	Key voltage input of KEY(A/D)2	–

AXY1136 (FHD MAIN ASSY: U4401)

- DC-DC Converter Unit

● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	Vin	Input terminal
2	Vin	Input terminal
3	GND	Input GND terminal
4	GND	Input GND terminal
5	ON/OFF	ON/OFF
6	GND	Output GND terminal
7	Vo3	Output terminal (1.8 V)
8	Vo1	Output terminal (3.3 V)
9	Vo1	Output terminal (3.3 V)
10	GND	Output GND terminal
11	GND	Output GND terminal
12	GND	Output GND terminal
13	Vo2	Output terminal (1.2 V)
14	Vo2	Output terminal (1.2 V)

EP2C20F484C8N (FHD MAIN ASSY: IC6601)

- FPGA

Pin Function

No.	F484	Pin Name	I/O	Pin Function
1	A1	GND	–	Connect to GND
2	B1	VCCIO2	–	V+3_3V_D_FPGA1
3	C1	Y2_O[1]	O	to Triton IN4 Y4_I1
4	D1	Y2_O[4]	O	to Triton IN4 Y4_I4
5	E1	C2_O[1]	O	to Triton IN4 C4_I1
6	F1	C2_O[4]	O	to Triton IN4 C4_I4
7	G1	NC	–	N.C.
8	H1	V2_O	O	to Triton IN4 V4_I
9	J1	SCLK	I	from M_Carrera FCK
10	K1	nCE	–	Configuration
11	L1	CLK3_I	I	DATACK (AD)
12	M1	CLK1_I	I	CLKB_O (Triton)
13	N1	MONITOR[0]	O	TEST_0 (probe land)
14	P1	RCR1_I[0]	I	from Triton side B output RCRB_O0
15	R1	RCR1_I[4]	I	from Triton side B output RCRB_O4
16	T1	GY1_I[1]	I	from Triton side B output GYB_O1
17	U1	GY1_I[5]	I	from Triton side B output GYB_O5
18	V1	BCB1_I[1]	I	from Triton side B output BCBB_O1
19	W1	BCB1_I[4]	I	from Triton side B output BCBB_O4
20	Y1	V1_I	I	from Triton side B output VB_O
21	AA1	VCCIO1	–	V+3_3V_D_FPGA1
22	AB1	GND	–	Connect to GND
23	AB2	VCCIO8	–	V+3_3V_D_FPGA1
24	AB3	RCR1_O[7]	O	to Triton IN2 RCR2_I7
25	AB4	RCR1_O[5]	O	to Triton IN2 RCR2_I5
26	AB5	RCR1_O[2]	O	to Triton IN2 RCR2_I2
27	AB6	GY1_O[7]	O	to Triton IN2 GY2_I7
28	AB7	GY1_O[3]	O	to Triton IN2 GY2_I3
29	AB8	GY1_O[0]	O	to Triton IN2 GY2_I0
30	AB9	BCB1_O[4]	O	to Triton IN2 BCB2_I4
31	AB10	BCB1_O[0]	O	to Triton IN2 BCB2_I0
32	AB11	H1_O	O	to Triton IN2 H2_I
33	AB12	FLDA_O	O	to Carrera FLDI
34	AB13	HA_O	O	to Carrera SHDI
35	AB14	BCBA_O[5]	O	to Carrera SBAI (5)
36	AB15	BCBA_O[1]	O	to Carrera SBAI (1)
37	AB16	GYA_O[5]	O	to Carrera SGAI (5)
38	AB17	GYA_O[1]	O	to Carrera SGAI (1)
39	AB18	RCRA_O[5]	O	to Carrera SRAI (5)
40	AB19	RCRA_O[3]	O	to Carrera SRAI (3)
41	AB20	RCRA_O[1]	O	to Carrera SRAI (1)
42	AB21	VCCIO7	–	V+3_3V_D_FPGA1
43	AB22	GND	–	Connect to GND
44	AA22	VCCIO6	–	V+3_3V_D_FPGA1
45	Y22	HB_O	O	to Carrera SHDI

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
46	W22	BCBB_O[6]	O	to Carrera SBAI (6)
47	V22	BCBB_O[3]	O	to Carrera SBAI (3)
48	U22	GYB_O[7]	O	to Carrera SGAI (7)
49	T22	GYB_O[3]	O	to Carrera SGAI (3)
50	R22	RCRB_O[7]	O	to Carrera SRAI (7)
51	P22	NC	–	N.C.
52	N22	RCRB_O[2]	O	to Carrera SRAI (2)
53	M22	GND+	–	Connect to GND
54	L22	CLK4_I	I	ODCK (DVI_Rx)
55	K22	V4_I	I	from DVI_Rx VSYNC
56	J22	RCR4_I[5]	I	from DVI_Rx QE21/R5
57	H22	NC	–	N.C.
58	G22	RCR4_I[1]	I	from DVI_Rx QE17/R1
59	F22	GY4_I[7]	I	from DVI_Rx QE15/G7
60	E22	GY4_I[3]	I	from DVI_Rx QE11/G3
61	D22	BCB4_I[7]	I	from DVI_Rx QE7/B7
62	C22	BCB4_I[3]	I	from DVI_Rx QE3/B3
63	B22	VCCIO5	–	V+3_3V_D_FPGA1
64	A22	GND	–	Connect to GND
65	A21	VCCIO4	–	V+3_3V_D_FPGA1
66	A20	V2_I	I	from HDMI VSYNC
67	A19	BCB2_I[0]	I	from HDMI Q0/B0
68	A18	BCB2_I[3]	I	from HDMI Q3/B3
69	A17	BCB2_I[6]	I	from HDMI Q6/B6
70	A16	GY2_I[1]	I	from HDMI Q9/G1
71	A15	GY2_I[5]	I	from HDMI Q13/G5
72	A14	RCR2_I[1]	I	from HDMI Q17/R1
73	A13	RCR2_I[7]	I	from HDMI Q23/R7
74	A12	CLK2_I	I	ODCK (HDMI_Rx)
75	A11	BCB3_I[1]	I	from AD BLUE (1)
76	A10	BCB3_I[5]	I	from AD BLUE (5)
77	A9	GY3_I[1]	I	from AD GREEN (1)
78	A8	GY3_I[5]	I	from AD GREEN (5)
79	A7	RCR3_I[1]	I	from AD RED (1)
80	A6	RCR3_I[5]	I	from AD RED (5)
81	A5	RCR3_I[7]	I	from AD RED (7)
82	A4	INT_V3_I	I	from RGB SW INT_VD_OUT2
83	A3	GND*	–	N.C. (probe land)
84	A2	VCCIO3-	–	V+3_3-1_8V_D_FPGA1
85	B2	GND	–	Connect to GND
86	C2	Y2_O[0]	O	to Triton IN4 Y4_I0
87	D2	Y2_O[3]	O	to Triton IN4 Y4_I3
88	E2	C2_O[0]	O	to Triton IN4 C4_I0
89	F2	C2_O[3]	O	to Triton IN4 C4_I3
90	G2	NC	–	N.C.
91	H2	DE2_O	O	to Triton IN4 DE4_I
92	J2	DATAO	bidir	from M_Carrera FRXD
93	K2	TCK	I	Configuration
94	L2	GND+	–	Connect to GND
95	M2	GND+	–	Connect to GND

Pin Function

No.	F484	Pin Name	I/O	Pin Function
96	N2	MONITOR[1]	O	TEST_1 (probe land)
97	P2	RCR1_I[1]	I	from Triton side B output RCRB_O1
98	R2	RCR1_I[5]	I	from Triton side B output RCRB_O5
99	T2	GY1_I[2]	I	from Triton side B output GYB_O2
100	U2	GY1_I[6]	I	from Triton side B output GYB_O6
101	V2	BCB1_I[0]	I	from Triton side B output BCBB_O0
102	W2	BCB1_I[5]	I	from Triton side B output BCBB_O5
103	Y2	H1_I	I	from Triton side B output HB_O
104	AA2	GND	–	Connect to GND
105	AA3	GND*	–	Standby (probe land)
106	AA4	RCR1_O[6]	O	to Triton IN2 RCR2_I6
107	AA5	RCR1_O[3]	O	to Triton IN2 RCR2_I3
108	AA6	RCR1_O[0]	O	to Triton IN2 RCR2_I0
109	AA7	GY1_O[4]	O	to Triton IN2 GY2_I4
110	AA8	GY1_O[1]	O	to Triton IN2 GY2_I1
111	AA9	BCB1_O[5]	O	to Triton IN2 BCB2_I5
112	AA10	BCB1_O[1]	O	to Triton IN2 BCB2_I1
113	AA11	V1_O	O	to Triton IN2 V2_I
114	AA12	DEA_O	O	to Carrera SDEI
115	AA13	VA_O	O	to Carrera SVDI
116	AA14	BCBA_O[4]	O	to Carrera SBAI (4)
117	AA15	BCBA_O[0]	O	to Carrera SBAI (0)
118	AA16	GYA_O[4]	O	to Carrera SGAI (4)
119	AA17	GYA_O[0]	O	to Carrera SGAI (0)
120	AA18	RCRA_O[4]	O	to Carrera SRAI (4)
121	AA19	RCRA_O[2]	O	to Carrera SRAI (2)
122	AA20	RCRA_O[0]	O	to Carrera SRAI (0)
123	AA21	GND	–	Connect to GND
124	Y21	DEB_O	O	to Carrera SDEI
125	W21	BCBB_O[7]	O	to Carrera SBAI (7)
126	V21	BCBB_O[4]	O	to Carrera SBA I(4)
127	U21	BCBB_O[0]	O	to Carrera SBAI (0)
128	T21	GYB_O[4]	O	to Carrera SGAI (4)
129	R21	GYB_O[0]	O	to Carrera SGAI (0)
130	P21	NC	–	N.C.
131	N21	RCRB_O[3]	O	to Carrera SRAI (3)
132	M21	GND+	–	Connect to GND
133	L21	GND+	–	Connect to GND
134	K21	DE4_I	I	from DVI_Rx DE
135	J21	RCR4_I[4]	I	from DVI_Rx QE20/R4
136	H21	NC	–	N.C.
137	G21	RCR4_I[0]	I	from DVI_Rx QE16/R0
138	F21	GY4_I[6]	I	from DVI_Rx QE14/G6
139	E21	GY4_I[2]	I	from DVI_Rx QE10/G2
140	D21	BCB4_I[6]	I	from DVI_Rx QE6/B6
141	C21	BCB4_I[2]	I	from DVI_Rx QE2/B2
142	B21	GND	–	Connect to GND
143	B20	H2_I	I	from HDMI HSYNC
144	B19	DE2_I	I	from HDMI DE
145	B18	BCB2_I[2]	I	from HDMI Q2/B2

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
146	B17	BCB2_I[5]	I	from HDMI Q5/B5
147	B16	GY2_I[3]	I	from HDMI Q11/G3
148	B15	GY2_I[4]	I	from HDMI Q12/G4
149	B14	RCR2_I[0]	I	from HDMI Q16/R0
150	B13	RCR2_I[5]	I	from HDMI Q21/R5
151	B12	GND+	–	Connect to GND
152	B11	BCB3_I[0]	I	from AD BLUE (0)
153	B10	BCB3_I[6]	I	from AD BLUE (6)
154	B9	BCB3_I[7]	I	from AD BLUE (7)
155	B8	GY3_I[6]	I	from AD GREEN (6)
156	B7	RCR3_I[2]	I	from AD RED (2)
157	B6	RCR3_I[6]	I	from AD RED (6)
158	B5	H3_I	I	from AD HSOUT
159	B4	EXT_V3_I	I	from RGB SW EXT_VD_OUT2
160	B3	GND*	–	Standby (probe land)
161	C3	*~nCSO~/GND*	O	Configuration
162	D3	GND*	–	Standby (probe land)
163	E3	Y2_O[7]	O	to Triton IN4 Y4_I7
164	F3	C2_O[2]	O	to Triton IN4 C4_I2
165	G3	C2_O[7]	O	to Triton IN4 C4_I7
166	H3	GND*	–	Connect to GND
167	J3	NC	–	N.C.
168	K3	GND	–	Connect to GND
169	L3	VCCIO2	–	V+3_3V_D_FPGA1
170	M3	VCCIO1	–	V+3_3V_D_FPGA1
171	N3	MONITOR[2]	O	TEST_2 (probe land)
172	P3	GND*	–	Connect to GND
173	R3	GND	–	Connect to GND
174	T3	GY1_I[3]	I	from Triton side B output GYB_O3
175	U3	GND*	–	Connect to GND
176	V3	GND	–	Connect to GND
177	W3	BCB1_I[6]	I	from Triton side B output BCBB_O6
178	Y3	DE1_I	I	from Triton side B output DEB_O
179	Y4	FLD1_I	I	from Triton side B output FLDB_O
180	Y5	RCR1_O[4]	O	to Triton IN2 RCR2_I4
181	Y6	RCR1_O[1]	O	to Triton IN2 RCR2_I1
182	Y7	GND*	–	Connect to GND
183	Y8	GND	–	Connect to GND
184	Y9	BCB1_O[6]	O	to Triton IN2 BCB2_I6
185	Y10	GND*	–	Connect to GND
186	Y11	VCCIO8	–	V+3_3V_D_FPGA1
187	Y12	VCCIO7	–	V+3_3V_D_FPGA1
188	Y13	GND*	–	Connect to GND
189	Y14	BCBA_O[3]	O	to Carrera SBAI (3)
190	Y15	GND	–	Connect to GND
191	Y16	GND*	–	Connect to GND
192	Y17	RCRA_O[7]	O	to Carrera SRAI (7)
193	Y18	VB_O	O	to Carrera SVDI
194	Y19	CLKB_O	O	to Carrera SCLKI
195	Y20	FLDB_O	O	to Carrera FLDI

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
196	W20	*LVDS91p/nCEO/GND*	O	Standby (probe land)
197	V20	BCBB_O[5]	O	to Carrera SBAI (5)
198	U20	GND*	–	Connect to GND
199	T20	GND	–	Connect to GND
200	R20	GND*	–	Connect to GND
201	P20	NC	–	N.C.
202	N20	nSTATUS	–	Configuration
203	M20	VCCIO6	–	V+3_3V_D_FPGA1
204	L20	VCCIO5	–	V+3_3V_D_FPGA1
205	K20	GND*	–	Connect to GND
206	J20	RCR4_I[3]	I	from DVI_Rx QE19/R3
207	H20	GND	–	Connect to GND
208	G20	GND*	–	Connect to GND
209	F20	GY4_I[5]	I	from DVI_Rx QE13/G5
210	E20	GY4_I[1]	I	from DVI_Rx QE9/G1
211	D20	BCB4_I[5]	I	from DVI_Rx QE5/B5
212	C20	BCB4_I[1]	I	from DVI_Rx QE1/B1
213	C19	BCB4_I[0]	I	from DVI_Rx QE0/B0
214	C18	BCB2_I[1]	I	from HDMI Q1/B1
215	C17	BCB2_I[4]	I	from HDMI Q4/B4
216	C16	GND*	–	Connect to GND
217	C15	GND	–	Connect to GND
218	C14	GY2_I[7]	I	from HDMI Q15/G7
219	C13	GND*	–	Connect to GND
220	C12	VCCIO4	–	V+3_3V_D_FPGA1
221	C11	VCCIO3	–	V+3_3-1_8V_D_FPGA1
222	C10	GND*	–	Connect to GND
223	C9	GY3_I[2]	I	from AD GREEN (2)
224	C8	GND	–	Connect to GND
225	C7	GND*	–	Connect to GND
226	C6	VCCIO3-	–	V+3_3-1_8V_D_FPGA1
227	C5	GND	–	Connect to GND
228	C4	*ASDO/GND*	O	Configuration
229	D4	GND*	–	Standby (probe land)
230	E4	Y2_O[6]	O	to Triton IN4 Y4_I6
231	F4	GND*	–	Connect to GND
232	G4	GND	–	Connect to GND
233	H4	CLK2_O	O	to Triton IN4 CLK4_I
234	J4	DATAI	I	from M_Carrera FTXD
235	K4	DATA0	I	Configuration
236	L4	nCONFIG	–	Configuration
237	M4	GND	–	Connect to GND
238	N4	RCR1_I[2]	I	from Triton side B output RCRB_O2
239	P4	NC	–	N.C.
240	R4	NC	–	N.C.
241	T4	VCCIO1	–	V+3_3V_D_FPGA1
242	U4	GY1_I[7]	I	from Triton side B output GYB_O7
243	V4	BCB1_I[2]	I	from Triton side B output BCBB_O2
244	W4	BCB1_I[7]	I	from Triton side B output BCBB_O7
245	W5	BCB1_I[3]	I	from Triton side B output BCBB_O3

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
246	W6	VCCIO8	–	V+3_3V_D_FPGA1
247	W7	GY1_O[5]	O	to Triton IN2 GY2_I5
248	W8	GY1_O[2]	O	to Triton IN2 GY2_I2
249	W9	BCB1_O[2]	O	to Triton IN2 BCBI2_I2
250	W10	GND	–	Connect to GND
251	W11	DE1_O	O	to Triton IN2 DE2_I
252	W12	GND+	–	Connect to GND
253	W13	GND	–	Connect to GND
254	W14	BCBA_O[2]	O	to Carrera SBAI (2)
255	W15	GYA_O[7]	O	to Carrera SGAI (7)
256	W16	GND*	–	N.C.
257	W17	VCCIO7	–	V+3_3V_D_FPGA1
258	W18	NC	–	N.C.
259	W19	GND	–	Connect to GND
260	V19	GND*	–	Standby (probe land)
261	U19	BCBB_O[1]	O	to Carrera SBAI (1)
262	T19	VCCIO6	–	V+3_3V_D_FPGA1
263	R19	GYB_O[1]	O	to Carrera SGAI (1)
264	P19	NC	–	N.C.
265	N19	GND	–	Connect to GND
266	M19	RCRB_O[0]	O	to Carrera SRAI (0)
267	L19	H4_I	I	from DVI_Rx HSYNC
268	K19	GND	–	Connect to GND
269	J19	RCR4_I[7]	I	from DVI_Rx QE23/R7
270	H19	RCR4_I[2]	I	from DVI_Rx QE18/R2
271	G19	VCCIO5	–	V+3_3V_D_FPGA1
272	F19	GND	–	Connect to GND
273	E19	GY4_I[0]	I	from DVI_Rx QE8/G0
274	D19	BCB4_I[4]	I	from DVI_Rx QE4/B4
275	D18	GND	–	Connect to GND
276	D17	VCCIO4	–	V+3_3V_D_FPGA1
277	D16	GY2_I[0]	I	from HDMI Q8/G0
278	D15	GY2_I[2]	I	from HDMI Q10/G2
279	D14	GY2_I[6]	I	from HDMI Q14/G6
280	D13	GND	–	Connect to GND
281	D12	RESETX	I	RESET input
282	D11	BCB3_I[2]	I	from AD BLUE (2)
283	D10	GND	–	Connect to GND
284	D9	GY3_I[3]	I	from AD GREEN (3)
285	D8	GY3_I[7]	I	from AD GREEN (7)
286	D7	RCR3_I[3]	I	from AD RED (3)
287	D6	Y2_O[5]	O	to Triton IN4 Y4_I5
288	D5	Y2_O[2]	O	to Triton IN4 Y4_I2
289	E5	VCCD_PLL3	–	V+1_2_D_FPGA1_PLL
290	F5	GNDG_PLL3	–	Connect to GND
291	G5	C2_O[6]	O	to Triton IN4 C4_I6
292	H5	H2_O	O	to Triton IN4 H4_I
293	J5	NC	–	N.C.
294	K5	TDI	I	Configuration
295	L5	TDO	O	Configuration

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
296	M5	GND*	–	N.C.
297	N5	NC	–	N.C.
298	P5	RCR1_I[6]	I	from Triton side B output RCRB_O6
299	R5	RCR1_I[7]	I	from Triton side B output RCRB_O7
300	T5	GY1_I[4]	I	from Triton side B output GYB_O4
301	U5	GNDD_PLL1	–	Connect to GND
302	V5	GNDG_PLL1	–	Connect to GND
303	V6	GND	–	Connect to GND
304	V7	GNDA_PLL1	–	Connect to GND
305	V8	GY1_O[6]	O	to Triton IN2 GY2_I6
306	V9	BCB1_O[7]	O	to Triton IN2 BCB2_I7
307	V10	VCCIO8	–	V+3_3V_D_FPGA1
308	V11	CLK1_O	O	to Triton IN2 CLK2_I
309	V12	GND+	–	Connect to GND
310	V13	VCCIO7	–	V+3_3V_D_FPGA1
311	V14	BCBA_O[6]	O	to Carrera SBAI (6)
312	V15	GYA_O[3]	O	to Carrera SGAI (3)
313	V16	GNDA_PLL4	–	Connect to GND
314	V17	GND	–	Connect to GND
315	V18	GNDG_PLL4	–	Connect to GND
316	U18	BCBB_O[2]	O	to Carrera SBAI (2)
317	T18	GYB_O[6]	O	to Carrera SGAI (6)
318	R18	GYB_O[5]	O	to Carrera SGAI (5)
319	P18	RCRB_O[4]	O	to Carrera SRAI (4)
320	N18	CONF_DONE	–	Configuration
321	M18	RCRB_O[1]	O	to Carrera SRAI (1)
322	L18	GND*	–	N.C.
323	K18	NC	–	N.C.
324	J18	RCR4_I[6]	I	from DVI_Rx QE22/R6
325	H18	GND*	–	N.C.
326	G18	GND*	–	N.C.
327	F18	GNDD_PLL2	–	Connect to GND
328	E18	GY4_I[4]	I	from DVI_Rx QE12/G4
329	E17	GNDG_PLL2	–	Connect to GND
330	E16	GNDA_PLL2	–	Connect to GND
331	E15	GND*	–	N.C.
332	E14	RCR2_I[3]	I	from HDMI Q19/R3
333	E13	VCCIO4	–	V+3_3V_D_FPGA1
334	E12	GND+	–	Connect to GND
335	E11	BCB3_I[3]	I	from AD BLUE (3)
336	E10	VCCIO3	–	V+3_3-1_8V_D_FPGA1
337	E9	GY3_I[4]	I	from AD GREEN (4)
338	E8	RCR3_I[0]	I	from AD RED (0)
339	E7	RCR3_I[4]	I	from AD RED (4)
340	E6	VCCA_PLL3	–	V+1_2_D_FPGA1_PLL
341	F6	GNDD_PLL3	–	Connect to GND
342	G6	C2_O[5]	O	to Triton IN4 C4_I5
343	H6	SENB	I	from M_Carrera FCE
344	J6	NC	–	N.C.
345	K6	TMS	I	Configuration

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
346	L6	DCLK	–	Configuration
347	M6	GND*	–	N.C.
348	N6	MONITOR[3]	O	TEST_3 (probe land)
349	P6	RCR1_I[3]	I	from Triton side B output RCRB_O3
350	R6	GY1_I[0]	I	from Triton side B output GYB_O0
351	T6	GND*	–	N.C.
352	U6	VCCD_PLL1	–	V+1_2_D_FPGA1_PLL
353	U7	VCCA_PLL1	–	V+1_2_D_FPGA1_PLL
354	U8	GND*	–	N.C.
355	U9	BCB1_O[3]	O	to Triton IN2 BCB2_I3
356	U10	GND*	–	N.C.
357	U11	GND+	–	Connect to GND
358	U12	GND+	–	Connect to GND
359	U13	BCBA_O[7]	O	to Carrera SBAI (7)
360	U14	GND*	–	N.C.
361	U15	GYA_O[6]	O	to Carrera SGAI (6)
362	U16	VCCA_PLL4	–	V+1_2_D_FPGA1_PLL
363	U17	VCCD_PLL4	–	V+1_2_D_FPGA1_PLL
364	T17	GNDD_PLL4	–	Connect to GND
365	R17	GYB_O[2]	O	to Carrera SGAI (2)
366	P17	RCRB_O[5]	O	to Carrera SRAI (5)
367	N17	MSEL1	–	Configuration
368	M17	MSEL0	–	Configuration
369	L17	NC	–	N.C.
370	K17	NC	–	N.C.
371	J17	GND*	–	N.C.
372	H17	GND*	–	N.C.
373	G17	GND*	–	N.C.
374	F17	VCCD_PLL2	–	V+1_2_D_FPGA1_PLL
375	F16	VCCA_PLL2	–	V+1_2_D_FPGA1_PLL
376	F15	GND*	–	N.C.
377	F14	RCR2_I[2]	I	from HDMI Q18/R2
378	F13	RCR2_I[4]	I	from HDMI Q20/R4
379	F12	RCR2_I[6]	I	from HDMI Q22/R6
380	F11	BCB3_I[4]	I	from AD BLUE (4)
381	F10	GY3_I[0]	I	from AD GREEN (0)
382	F9	GND*	–	N.C.
383	F8	GND*	–	N.C.
384	F7	GNDA_PLL3	–	Connect to GND
385	G7	GND*	–	N.C.
386	H7	GND*	–	N.C.
387	J7	VCCIO2	–	V+3_3V_D_FPGA1
388	K7	GND	–	Connect to GND
389	L7	NC	–	N.C.
390	M7	NC	–	N.C.
391	N7	GND	–	Connect to GND
392	P7	VCCIO1	–	V+3_3V_D_FPGA1
393	R7	GND*	–	N.C.
394	T7	GND*	–	N.C.
395	T8	GND*	–	N.C.

- **Pin Function**

No.	F484	Pin Name	I/O	Pin Function
396	T9	VCCIO8	–	V+3_3V_D_FPGA1
397	T10	GND	–	Connect to GND
398	T11	GND*	–	N.C.
399	T12	GND*	–	N.C.
400	T13	GND	–	Connect to GND
401	T14	VCCIO7	–	V+3_3V_D_FPGA1
402	T15	GND*	–	N.C.
403	T16	RCRA_O[6]	O	to Carrera SRAI (6)
404	R16	GYA_O[2]	O	to Carrera SGAI (2)
405	P16	VCCIO6	–	V+3_3V_D_FPGA1
406	N16	GND	–	Connect to GND
407	M16	NC	–	N.C.
408	L16	NC	–	N.C.
409	K16	GND	–	Connect to GND
410	J16	VCCIO5	–	V+3_3V_D_FPGA1
411	H16	GND*	–	N.C.
412	G16	BCB2_I[7]	I	from HDMI Q7/B7
413	G15	GND*	–	N.C.
414	G14	VCCIO4	–	V+3_3V_D_FPGA1
415	G13	GND	–	Connect to GND
416	G12	GND*	–	N.C.
417	G11	GND*	–	N.C.
418	G10	GND	–	Connect to GND
419	G9	VCCIO3	–	V+3_3-1_8V_D_FPGA1
420	G8	GND*	–	N.C.
421	H8	GND*	–	N.C.
422	J8	NC	–	N.C.
423	K8	NC	–	N.C.
424	L8	GND*	–	N.C.
425	M8	NC	–	N.C.
426	N8	NC	–	N.C.
427	P8	GND*	–	N.C.
428	R8	GND*	–	N.C.
429	R9	GND*	–	N.C.
430	R10	GND*	–	N.C.
431	R11	GND*	–	N.C.
432	R12	GND*	–	N.C.
433	R13	GND*	–	N.C.
434	R14	CLKA_O	O	to Carrera SCLKI
435	R15	GND*	–	N.C.
436	P15	RCRB_O[6]	O	to Carrera SRAI (6)
437	N15	GND*	–	N.C.
438	M15	NC	–	N.C.
439	L15	NC	–	N.C.
440	K15	NC	–	N.C.
441	J15	GND*	–	N.C.
442	H15	GND*	–	N.C.
443	H14	GND*	–	N.C.
444	H13	GND*	–	N.C.
445	H12	GND*	–	N.C.

● Pin Function

No.	F484	Pin Name	I/O	Pin Function
446	H11	GND*	–	N.C.
447	H10	GND*	–	N.C.
448	H9	GND*	–	N.C.
449	J9	NC	–	N.C.
450	K9	VCCINT	–	V+1_2V_D_FPGA1_INT
451	L9	VCCINT	–	V+1_2V_D_FPGA1_INT
452	M9	VCCINT	–	V+1_2V_D_FPGA1_INT
453	N9	VCCINT	–	V+1_2V_D_FPGA1_INT
454	P9	GND*	–	N.C.
455	P10	VCCINT	–	V+1_2V_D_FPGA1_INT
456	P11	VCCINT	–	V+1_2V_D_FPGA1_INT
457	P12	VCCINT	–	V+1_2V_D_FPGA1_INT
458	P13	VCCINT	–	V+1_2V_D_FPGA1_INT
459	P14	NC	–	N.C.
460	N14	VCCINT	–	V+1_2V_D_FPGA1_INT
461	M14	VCCINT	–	V+1_2V_D_FPGA1_INT
462	L14	VCCINT	–	V+1_2V_D_FPGA1_INT
463	K14	VCCINT	–	V+1_2V_D_FPGA1_INT
464	J14	GND*	–	N.C.
465	J13	VCCINT	–	V+1_2V_D_FPGA1_INT
466	J12	VCCINT	–	V+1_2V_D_FPGA1_INT
467	J11	VCCINT	–	V+1_2V_D_FPGA1_INT
468	J10	VCCINT	–	V+1_2V_D_FPGA1_INT
469	K10	GND	–	Connect to GND
470	L10	GND	–	Connect to GND
471	M10	GND	–	Connect to GND
472	N10	GND	–	Connect to GND
473	N11	GND	–	Connect to GND
474	N12	GND	–	Connect to GND
475	N13	GND	–	Connect to GND
476	M13	GND	–	Connect to GND
477	L13	GND	–	Connect to GND
478	K13	GND	–	Connect to GND
479	K12	GND	–	Connect to GND
480	K11	GND	–	Connect to GND
481	L11	GND	–	Connect to GND
482	M11	GND	–	Connect to GND
483	M12	GND	–	Connect to GND
484	L12	GND	–	Connect to GND

■ MB91305PMC-G-BND (FHD MAIN ASSY: IC5002)

- Main Microcomputer

● Pin Function

No.	Mark	Pin Name	I/O	Pin Function	Active
1	VCEE		–	Power supply (+3.3 V)	
2	VSS		–	GND	
3	VCCI		–	Power supply (+1.8 V)	
4	D24	DQ8		External data bus	
5	D25	DQ9		External data bus	
6	D26	DQ10		External data bus	
7	D27	DQ11		External data bus	
8	D28	DQ12		External data bus	
9	D29	DQ13		External data bus	
10	D30	DQ14		External data bus	
11	D31	DQ15		External data bus	
12	VCEE		–	Power supply (+3.3 V)	
13	VSS		–	GND	
14	VCCI		–	Power supply (+1.8 V)	
15	RDX	OE	O	External bus read strobe output	
16	WR0X/DQMUU	WE	O	External bus write strobe output	
17	WR1X/DQMUL/P30	FAN_CONT	O	TP: FAN power SW (ON/OFF)	H
18	CS0X/P31	CE		External bus chip enable	
19	CS1X/P32	CE_IF	O	3-wires serial communication with the UIF microcomputer, enable old IF_CE	L
20	CS4X/P33	SP_MUTE	O	Small signal system MUTE No DELAY time	H
21	CS5X/P34	A_AMP_MUTE	O	Mute for POWER AMP ON: no DELAY, OFF: Delay of about 400 msec	H
22	CS6X/P35	PSW_DVI	O	Power SW for DVI	H
23	CS7X/P36	NC	O		–
24	RDY/P37	BUSY_IC3	I	3-wires serial communication with the Carrera, busy old IC3_BUSY	H
25	BGRNTX/P40	BUSY_IF	I	3-wires serial communication with the UIF microcomputer, busy old IF_BUSY	H
26	BRQ/P41	WE_IC3	O	UART path SW for Carrera	L
27	SYSCLK/P42	WATCH_DOG	O	Pin for examination with TP	–
28	MCLKE/P43	PSW1	O	Power SW1 (DCDC converter output mute)	L
29	MCLK/P44	SD_DET	O	Pin for examination with TP	–
30	ASX/LBAX/SRASX/P45	RST_DVI	O	DVI RST(When the function is STB, DVI exists.)	H
31	BAAX/SCASX/P46	WE_ROM	O	EDID_ROM write protect for PC/HDMI	H
32	WRX/SWRX/P47	CE_IC3	O	3-wires serial communication with the Carrera, enable old IC3_CE	L
33	VCEE		–	Power supply (+3.3 V)	
34	VSS		–	GND	
35	VCCI		–	Power supply (+1.8 V)	
36	A00	NC		N.C. setting	
37	A01	A0		External address bus	
38	A02	A1		External address bus	
39	A03	A2		External address bus	
40	A04	A3		External address bus	
41	A05	A4		External address bus	
42	A06	A5		External address bus	
43	A07	A6		External address bus	
44	A08	A7		External address bus	
45	A09	A8		External address bus	

● Pin Function

No.	Mark	Pin Name	I/O	Pin Function	Active
46	A10	A9		External address bus	
47	A11	A10		External address bus	
48	A12	A11		External address bus	
49	A13	A12		External address bus	
50	A14	A13		External address bus	
51	A15	A14		External address bus	
52	VCEE		–	Power supply (+3.3 V)	
53	VSS		–	GND	
54	VCCI		–	Power supply (+1.8 V)	
55	A16/P50	A15		External address bus	
56	A17/P51	A16		External address bus	
57	A18/P52	A17		External address bus	
58	A19/P53	A18		External address bus	
59	A20/P54	A19		External address bus	
60	A21/P55	NC	O		
61	A22/P56	ELITE_DET	I	ELITE model (North America)/ADVANCE model (Europe)/China model (General)/HDD (country) distinction	H
62	A23/P57	APPLI_ON	I	Detect connection of the ASIC examination jig	L
63	VCEE		–	Power supply (+3.3 V)	
64	X0		I	Clock input	
65	VSS		–	GND	
66	X1		O	Clock output	
67	VCCI		–	Power supply (+1.8 V)	
68	INTX	RESET	I	External reset input	
69	MD0	MD0	I	Operation mode setting L fixing	
70	MD1	MD1	I	Operation mode setting H fixing (not USB)	
71	MD2	MD2	I	Operation mode setting L: Normal, H: at writing	
72	MD3	MD3	I	Operation mode setting L fixing	
73	AVCC		–	Power supply for A/D	
74	AVRH		–	Reference power supply for A/D	
75	AVSS/AVRL		–	GND for A/D	
76	AN0	TEMP2	I	(A/D) Temperature sensor Outside temperature	AD
77	AN1	NC	I	–	AD
78	AN2/PF0	MODE	I	(A/D) Operation mode distinction	AD
79	AN3/PF1	NC	O	–	L
80	AN4/PF2	RST_FPGA	O	Initialization of F.F. in the FPGA (after CONF_DONE)	L
81	AN5/PF3	NC	O	–	L
82	AN5/PF4	RST4	I	For abnormal operation detection Monitor V+12V	L
83	AN7/PF5	DSUB_DET	I	PC V sync. signal detection	H
84	AN8/PF6	A_STBY_B	O	AUDIO power AMP ON/OFF	H
85	AN9/PF7	REQ_MVDEC	I	Modification information of the various detection result as the frequency judgments	L
86	ICS0	ICS0		Status output for development tool	
87	ICS1	ICS1		Status output for development tool	
88	ICS2	ICS2		Status output for development tool	
89	ICD0	ICD0		Data output for development tool	
90	ICD1	ICD1		Data output for development tool	
91	ICD2	ICD2		Data output for development tool	
92	ICD3	ICD3		Data output for development tool	
93	IBREAK	IBREAK		Break for development tool	
94	ICLK	ICLK		Clock for development tool	
95	TRSTX	TRSTX		Reset for development tool	

● Pin Function

No.	Mark	Pin Name	I/O	Pin Function	Active
96	VCEE		–	Power supply (+3.3 V)	
97	VSS		–	GND	
98	VCCI		–	Power supply (+1.8 V)	
99	SIN0/P60	RXD_WR	I	External PC/flash ROM writer/PC Card sharing	L
100	SOUT0/P61	TXD_WR	O	External PC/flash ROM writer/PC Card sharing	L
101	SCK0/P62	CLK_WR	I	Communication with the flash ROM writer, clock input	L
102	SIN1/P63	NC	I	–	L
103	SOUT1/P64	DATA_FPGA1	O	For FPGA configuration	L
104	SCK1/P65	DCLK_FPGA1	O	For FPGA configuration	L
105	SIN2/P70	RXD_IF	I	3-wires serial communication with the UIF microcomputer, data input	L
106	SOUT2/P71	TXD_IF	O	3-wires serial communication with the UIF microcomputer, data output	L
107	SCK2/P72	CLK_IF	O	3-wires serial communication with the UIF microcomputer, clcok output	L
108	SIN3/P73	RXD_MD	I	UART communication with the module microcomputer, data input	L
109	SOUT3/P74	TXD_MD	O	UART communication with the module microcomputer, data output	L
110	SCK3/P75	RST_ASIC	O	ASIC forced reset	L
111	SIN4/P80	RXD_IC3	I	3-wires serial communication with the Carrea, data input	L
112	SOUT4/P81	TXD_IC3	O	3-wires serial communication with the Carrea, data output	L
113	SCK4/P82	CLK_IC3	O	3-wires serial communication with the Carrea, clock output	L
114	SCL0/P83	SCL_AV3	O	When a function is STB, IIC communication for active device, clock output	L
115	SDA0/P84	SDA_AV3	I/O	When a function is STB, IIC communication for active device, data I/O	L
116	SCL1/P90	SCL_MA	O	When a function is STB, IIC communication for defective device, clock output	
117	SDA1/P91	SDA_MA	I/O	When a function is STB, IIC communication for defective device, data I/O	L
118	SCL2/P92	SCL_AUDIO	O	Audio preamplifier control	L
119	SDA2/P93	SDA_AUDIO	I/O	Audio preamplifier control	L
120	SCL3/P94	SCL_DVI	O	IIC communication for DVI_PM mode, clock output	L
121	SDA3/P95	SDA_DVI	I/O	IIC communication for DVI_PM mode, data I/O	L
122	SCL4/P96	SCL_EP	O	IIC communication for EEPROM, clock output	L
123	SDA4/P97	SDA_EP	I/O	IIC communication for EEPROM, data I/O	L
124	VCEE		–	Power supply (+3.3 V)	
125	VSS		–	GND	
126	VCCI		–	Power supply (+1.8 V)	
127	NMIX	NC	–	N.C.	
128	INT0/PA0	RST2	O	For abnormal operation detection Monitor V+3_3V_D	L
129	INT1/PA1	RST3	I	(Interrupt) Outage detection of AC	↑
130	INT2/PA2	HDMI_INT	I	(Interrupt) HDMI information packet modification interrupt (HDMI 1)	L
131	INT3/PA3	REQ_IF	I	Communication request from the UIF microcomputer	H
132	INT4/PA4	REQ_IC3	I	Communication request from the Carrera (Signal mode modification) old IC3_REQ	H
133	INT5/PA5	NC	O	Reserved (interruption)	
134	INT6/PA6	REQ_MD	I	Communication request from the module microcomputer old REQ	H
135	INT7/PA7	A_NG_B	I	Speaker DC detection	L
136	INT8/PB0	NC	O	–	L
137	INT9/PB1	NC	O	–	L
138	INT10/ATRG/PB2	NC	O	–	L
139	INT11/FRCK/PB3	NC	O	–	L
140	INT12/ICU0/PB4	nSTATUS	I	Configuration state	L
141	INT13/ICU1/PB5	CONF DONE	I	Configuration state	H
142	INT14/ICU2/PB6	REQ_PEAK_M	I	Communication request from the Carrera (Peak detection at Silvia side in the Triton)	H
143	INT15/ICU3/PB7	REQ_PEAK_S	I	Communication request from the Carrera(Peak detection at Carrera in the Triton)	H
144	VCEE		–	Power supply (+3.3 V)	
145	UDP		–	USB plus terminal (not used)	

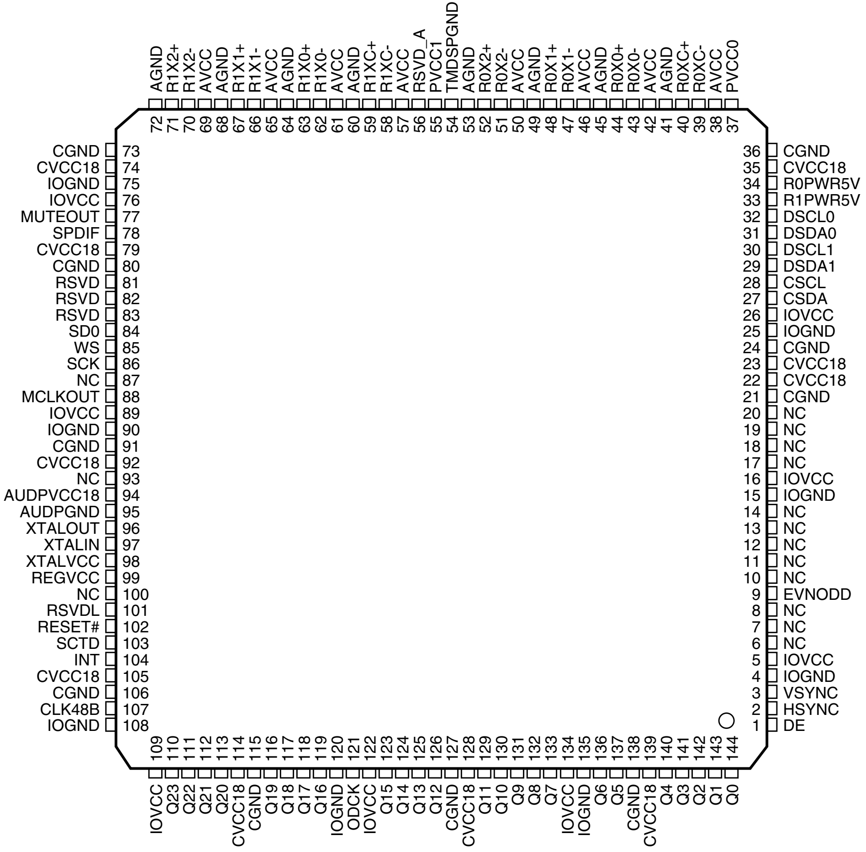
● Pin Function

No.	Mark	Pin Name	I/O	Pin Function	Active
146	UDM			USB minus terminal (not used)	
147	VSS		–	GND	
148	VCCI		–	Power supply (+1.8 V)	
149	PPG0/PC0	FAN_CONT_POW0	O	FAN_PWM control output 6 V to 11 V control	PWM
150	PPG1/PC1	HOT_P1	O	Hot plug information for HDMI to return to the transmitter side INPUT3	L
151	PPG2/PC2	HOT_P2	O	Hot plug information for HDMI to return to the transmitter side INPUT2	L
152	PPG3/PC3	RELAY	O	MR power ON relay	H
153	TOUT0/TRG0/PC4	WE_MD	O	UART path change SW for the module microcomputer	L
154	TOUT1/TRG1/PC5	HOT_P3	O	Operate hot plug information for DVI to return to the transmitter side	L
155	TOUT2/PC6	FAN_NG1	I	NG signal detection from the FAN	H
156	RIN/PC7	NC	O	–	L
157	DREQ0/PD0		I	GND	L
158	DACK0/PD1	LVDS_ON	O	LVDS output control (not used)	H
159	DEOP0/PD2	FAN_CONT_POW1	O	Standby circuit for four stages FAN control (not used)	H
160	DREQ1/TIN0/PD3	NC	I	GND	–
161	DACK1/TIN1/PD4	NC	I	GND	–
162	DEOP1/TIN2/PD5	PD5	I	Detect in rewriting from a flash ROM writer (sync ⇔ asynchronous)	L
163	DREQ2/TRG1/PE0	nCONFIG	O	FPGA hardware reset	L
164	DACK2/TRG2/PE1	DEMP	O	–	L
165	DEOP2/TRG3/PE2	EEPRST	O	Power reset SW of EEPROM	L
166	VCEE		–	Power supply (+3.3 V)	
167	VSS		–	GND	
168	VCCI		–	Power supply (+1.8 V)	
169	D16/P20	DQ0		External data bus	
170	D17/P21	DQ1		External data bus	
171	D18/P22	DQ2		External data bus	
172	D19/P23	DQ3		External data bus	
173	D20/P24	DQ4		External data bus	
174	D21/P25	DQ5		External data bus	
175	D22/P26	DQ6		External data bus	
176	D23/P27	DQ7		External data bus	

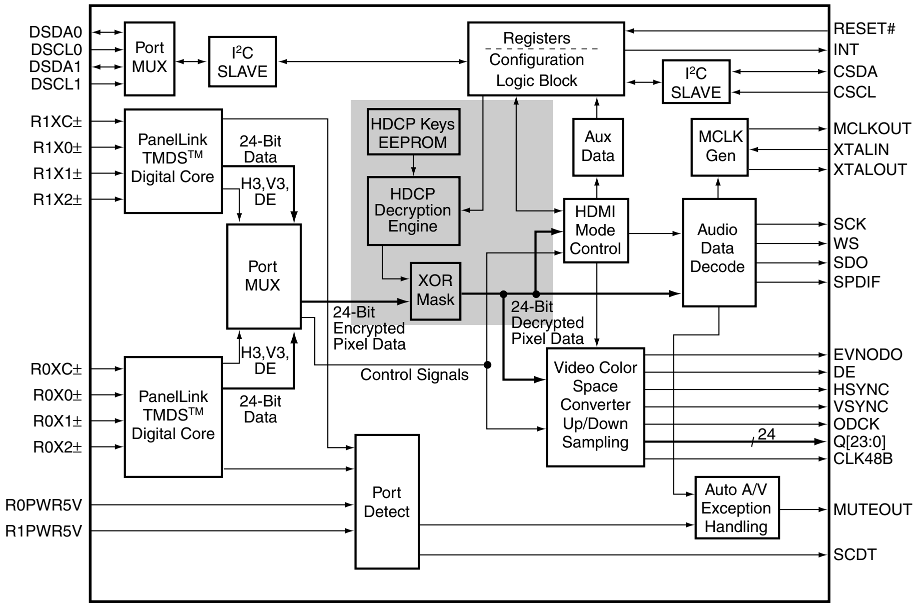
SiI9023CTU-K (FHD MAIN ASSY: IC6801)

- HDMI Rx

● Pin Arrangement (Top view)


1 DE
2 HSYNC
3 VSYNC
4 IOGND
5 IOVCC
6 NC
7 NC
8 NC
9 EVNODD
10 NC
11 NC
12 NC
13 NC
14 NC
15 IOGND
16 IOVCC
17 NC
18 NC
19 NC
20 NC
21 CGND
22 CVCC18
23 CVCC18
24 CGND
25 IOGND
26 IOVCC
27 CSDA
28 CSCL
29 DSDA1
30 DSCL1
31 DSDA0
32 DSCL0
33 R1PWR5V
34 R0PWR5V
35 CVCC18
36 CGND
37 PVCC0
38 AVCC
39 R0XC-
40 R0XC+
41 AGND
42 AVCC
43 R0X0-
44 R0X0+
45 AGND
46 AVCC
47 R0X1-
48 R0X1+
49 AGND
50 AVCC
51 R0X2-
52 R0X2+
53 AGND
54 TMDSPGND
55 PVCC1
56 RSVD_A
57 AVCC
58 R1XC-
59 R1XC+
60 AGND
61 AVCC
62 R1X0-
63 R1X0+
64 AGND
65 AVCC
66 R1X1-
67 R1X1+
68 AGND
69 AVCC
70 R1X2-
71 R1X2+
72 AGND
73 CGND
74 CVCC18
75 IOGND
76 IOVCC
77 MUTEOUT
78 SPDIF
79 CVCC18
80 CGND
81 RSVD
82 RSVD
83 RSVD
84 SD0
85 WS
86 SCK
87 NC
88 MCLKOUT
89 IOVCC
90 IOGND
91 CGND
92 CVCC18
93 NC
94 AUDPVCC18
95 AUDPGND
96 XTALOUT
97 XTALIN
98 XTALVCC
99 REGVCC
100 NC
101 RSVDL
102 RESET#
103 SCTD
104 INT
105 CVCC18
106 CGND
107 CLK48B
108 IOGND
109 IOVCC
110 Q23
111 Q22
112 Q21
113 Q20
114 CVCC18
115 CGND
116 Q19
117 Q18
118 Q17
119 Q16
120 IOGND
121 ODCK
122 IOVCC
123 Q15
124 Q14
125 Q13
126 Q12
127 CGND
128 CVCC18
129 Q11
130 Q10
131 Q9
132 Q8
133 Q7
134 IOVCC
135 IOGND
136 Q6
137 Q5
138 CGND
139 CVCC18
140 Q4
141 Q3
142 Q2
143 Q1
144 Q0

● Block Diagram


DSDA0
DSCL0
DSDA1
DSCL1
Port MUX
I²C SLAVE
Registers
Configuration Logic Block
RESET#
INT
I²C SLAVE
CSDA
CSCL
R1XC±
R1X0±
R1X1±
R1X2±
PanelLink TMDS™ Digital Core
24-Bit Data
H3,V3, DE
HDCP Keys EEPROM
HDCP Decryption Engine
Aux Data
MCLK Gen
MCLKOUT
XTALIN
XTALOUT
HDMI Mode Control
Audio Data Decode
SCK
WS
SDO
SPDIF
Port MUX
XOR Mask
24-Bit Encrypted Pixel Data
24-Bit Decrypted Pixel Data
H3,V3, DE
Control Signals
R0XC±
R0X0±
R0X1±
R0X2±
PanelLink TMDS™ Digital Core
24-Bit Data
Video Color Space Converter Up/Down Sampling
EVNODO
DE
HSYNC
VSYNC
ODCK
24
Q[23:0]
CLK48B
R0PWR5V
R1PWR5V
Port Detect
Auto A/V Exception Handling
MUTEOUT
SCDT

● Pin Function

No.	Pin Name	I/O	Pin Function
1	DE	O	Data enable
2	HSYNC	O	H. sync. output control
3	VSYNC	O	V. sync. output control
4	IOGND	–	I/O GND
5	IOVCC	–	I/O VCC
6	NC	–	Non connection
7	NC	–	Non connection
8	NC	–	Non connection
9	EVNODD	O	EVEN/ODD field indicator
10	NC	–	Non connection
11	NC	–	Non connection
12	NC	–	Non connection
13	NC	–	Non connection
14	NC	–	Non connection
15	IOGND	–	I/O GND
16	IOVCC	–	I/O VCC
17	NC	–	Non connection
18	NC	–	Non connection
19	NC	–	Non connection
20	NC	–	Non connection
21	CGND	–	Digital logic GND
22	CVCC18	–	Digital logic VCC (1.8 V)
23	CVCC18	–	Digital logic VCC (1.8 V)
24	CGND	–	Digital logic GND
25	IOGND	–	I/O GND
26	IOVCC	–	I/O VCC
27	CSDA	I/O	Configuration I2C data
28	CSCL	I	Configuration I2C clock
29	DSDA1	I/O	DDC I2C data for port 1
30	DSCL1	I	DDC I2C clock for port 1
31	DSDA0	I/O	DDC I2C data for port 0
32	DSCL0	I	DDC I2C clock for port 0
33	R1PWR5V	I	Port 1 transfer detection
34	R0PWR5V	I	Port 0 transfer detection
35	CVCC18	–	Digital logic VCC (1.8 V)
36	CGND	–	Digital logic GND
37	PVCC0	–	TMDS port 0 PLL VCC
38	AVCC	–	TMDS analog VCC
39	R0XC-	I	TMDS input clock
40	R0XC+	I	TMDS input clock
41	AGND	–	TMDS analog GND
42	AVCC	–	TMDS analog VCC
43	R0X0-	I	TMDS input data
44	R0X0+	I	TMDS input data
45	AGND	–	TMDS analog GND
46	AVCC	–	TMDS analog VCC
47	R0X1-	I	TMDS input data
48	R0X1+	I	TMDS input data
49	AGND	–	TMDS analog GND
50	AVCC	–	TMDS analog VCC

● Pin Function

No.	Pin Name	I/O	Pin Function
51	R0X2-	I	TMDS input data
52	R0X2+	I	TMDS input data
53	AGND	–	TMDS analog GND
54	TMDSPGND	–	TMDS PLL GND
55	PVCC1	–	TMDS port 1 PLL VCC
56	RSVD_A	–	Reserved
57	AVCC	–	TMDS analog VCC
58	R1XC-	I	TMDS input clock
59	R1XC+	I	TMDS input clock
60	AGND	–	TMDS analog GND
61	AVCC	–	TMDS analog VCC
62	R1X0-	I	TMDS input data
63	R1X0+	I	TMDS input data
64	AGND	–	TMDS analog GND
65	AVCC	–	TMDS analog VCC
66	R1X1-	I	TMDS input data
67	R1X1+	I	TMDS input data
68	AGND	–	TMDS analog GND
69	AVCC	–	TMDS analog VCC
70	R1X2-	I	TMDS input data
71	R1X2+	I	TMDS input data
72	AGND	–	TMDS analog GND
73	CGND	–	Digital logic GND
74	CVCC18	–	Digital logic VCC (1.8 V)
75	IOGND	–	I/O GND
76	IOVCC	–	I/O VCC
77	MUTEOUT	O	Audio output mute
78	SPDIF	O	S/PDIF audio output
79	CVCC18	–	Digital logic VCC (1.8 V)
80	CGND	–	Digital logic GND
81	RSVD	O	–
82	RSVD	O	–
83	RSVD	O	–
84	SD0	O	I2C serial data output
85	WS	O	I2C word select output
86	SCK	O	I2C serial clock output
87	NC	–	Non connection
88	MCLKOUT	O	Audio master clock output
89	IOVCC	–	I/O VCC
90	IOGND	–	I/O GND
91	CGND	–	Digital logic GND
92	CVCC18	–	Digital logic VCC (1.8 V)
93	NC	–	Non connection
94	AUDPVCC18	–	ACR PLL VCC
95	AUDPGND	–	ACR PLL GND
96	XTALOUT	O	Crystal clock output
97	XTALIN	I	Crystal clock input
98	XTALVCC	–	ACR PLL crystal input VCC
99	REGVCC	–	ACR PLL regulator VCC
100	NC	–	Non connection

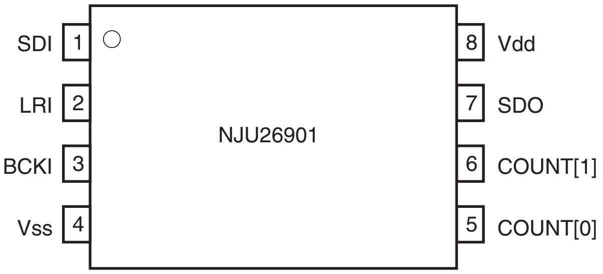
● Pin Function

No.	Pin Name	I/O	Pin Function
101	RSVDL	I	Reserved, Low fixing
102	RESET#	I	Reset, active Low
103	SCTD	O	Display active video with the HDMI input port
104	INT	O	Interruption output
105	CVCC18	–	Digital logic VCC (1.8 V)
106	CGND	–	Digital logic GND
107	CLK48B	I/O	Data bus latch enable
108	IOGND	–	I/O GND
109	IOVCC	–	I/O VCC
110	Q23	O	24-bit output, pixel data bus
111	Q22	O	24-bit output, pixel data bus
112	Q21	O	24-bit output, pixel data bus
113	Q20	O	24-bit output, pixel data bus
114	CVCC18	–	Digital logic VCC (1.8 V)
115	CGND	–	Digital logic GND
116	Q19	O	24-bit output, pixel data bus
117	Q18	O	24-bit output, pixel data bus
118	Q17	O	24-bit output, pixel data bus
119	Q16	O	24-bit output, pixel data bus
120	IOGND	–	I/O GND
121	ODCK	O	Output data clock
122	IOVCC	–	I/O VCC
123	Q15	O	24-bit output, pixel data bus
124	Q14	O	24-bit output, pixel data bus
125	Q13	O	24-bit output, pixel data bus
126	Q12	O	24-bit output, pixel data bus
127	CGND	–	Digital logic GND
128	CVCC18	–	Digital logic VCC (1.8 V)
129	Q11	O	24-bit output, pixel data bus
130	Q10	O	24-bit output, pixel data bus
131	Q9	O	24-bit output, pixel data bus
132	Q8	O	24-bit output, pixel data bus
133	Q7	O	24-bit output, pixel data bus
134	IOVCC	–	I/O VCC
135	IOGND	–	I/O GND
136	Q6	O	24-bit output, pixel data bus
137	Q5	O	24-bit output, pixel data bus
138	CGND	–	Digital logic GND
139	CVCC18	–	Digital logic VCC (1.8 V)
140	Q4	O	24-bit output, pixel data bus
141	Q3	O	24-bit output, pixel data bus
142	Q2	O	24-bit output, pixel data bus
143	Q1	O	24-bit output, pixel data bus
144	Q0	O	24-bit output, pixel data bus

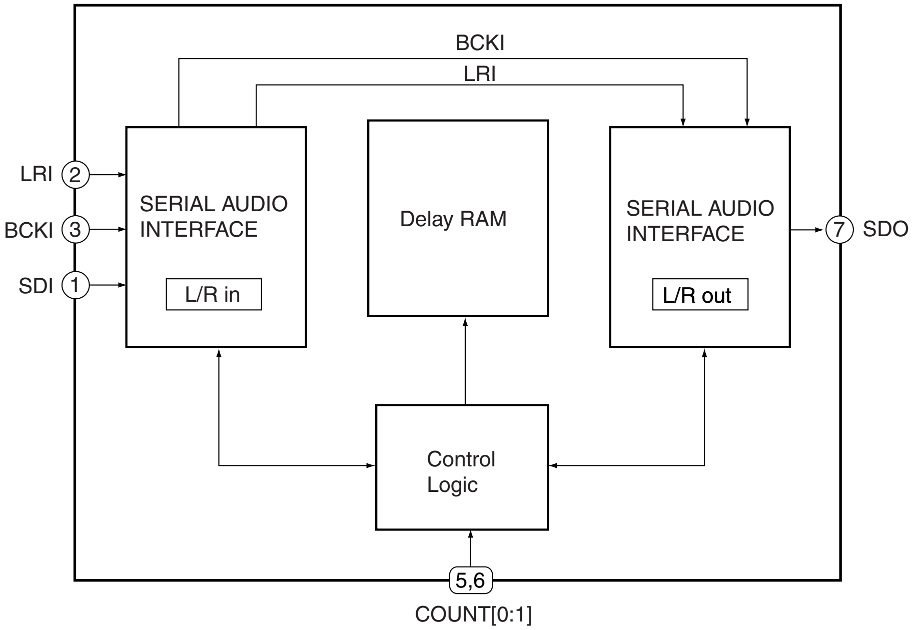
NJU26901E2 (FHD PRE AUDIO ASSY: IC8208)

- LIP Sync IC

● Pin Arrangement (Top view)


SDI
1
LRI
2
BCKI
3
Vss
4
NJU26901
8
Vdd
7
SDO
6
COUNT[1]
5
COUNT[0]

● Block Diagram


BCKI
LRI
LRI
2
BCKI
3
SDI
1
SERIAL AUDIO INTERFACE
L/R in
Delay RAM
SERIAL AUDIO INTERFACE
L/R out
7
SDO
Control Logic
5,6
COUNT[0:1]

● Pin Function

No.	Pin Name	I/O	Pin Function
1	SDI	I	Serial audio data input
2	LRI	I	LR clock input
3	BCKI	I	Serial clock input
4	Vss	–	– power supply (Normally: GND)
5	COUNT[0]	I*	Delay time setting 0
6	COUNT[1]	I*	Delay time setting 1
7	SDO	O	Serial audio data output
8	Vdd	–	+ power supply (Normally: +2.5 V)

* with pull up

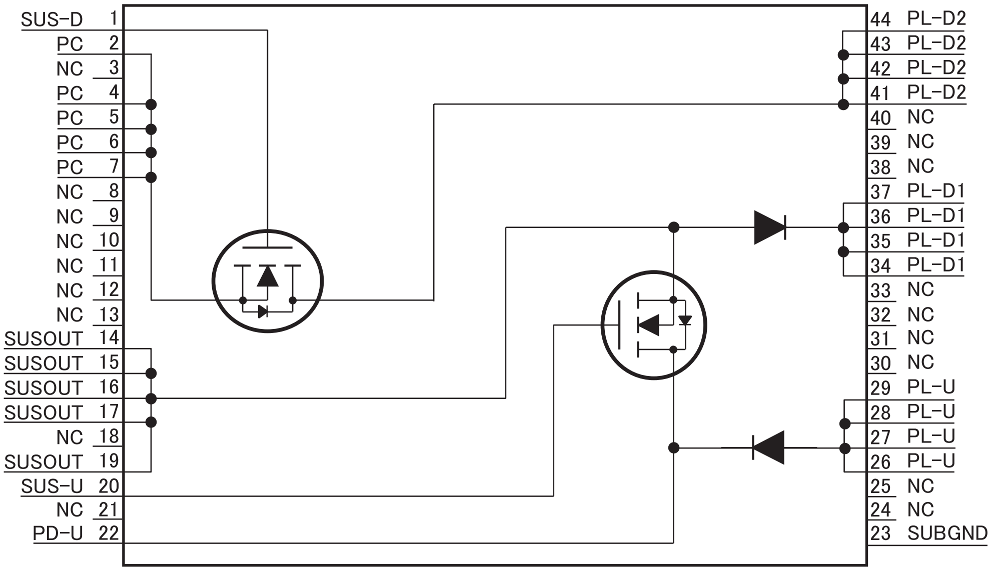
● Delay Time

Sampling Frequency (fs)	4/4 (COUNT[1:0]=11)	3/4 (COUNT[1:0]=01)	1/2 (COUNT[1:0]= 10)	1/4 (COUNT[1:0]= 00)
48KHz	85ms	64ms	43ms	21ms

■ AXF1159 (50FHD Y DRIVE ASSY: IC2103, IC2151)
(50FHD X DRIVE ASSY: IC1103, IC1131)

- DK Mod.

● Block Diagram


SUS-D 1
PC 2
NC 3
PC 4
PC 5
PC 6
PC 7
NC 8
NC 9
NC 10
NC 11
NC 12
NC 13
SUSOUT 14
SUSOUT 15
SUSOUT 16
SUSOUT 17
NC 18
SUSOUT 19
SUS-U 20
NC 21
PD-U 22
44 PL-D2
43 PL-D2
42 PL-D2
41 PL-D2
40 NC
39 NC
38 NC
37 PL-D1
36 PL-D1
35 PL-D1
34 PL-D1
33 NC
32 NC
31 NC
30 NC
29 PL-U
28 PL-U
27 PL-U
26 PL-U
25 NC
24 NC
23 SUBGND

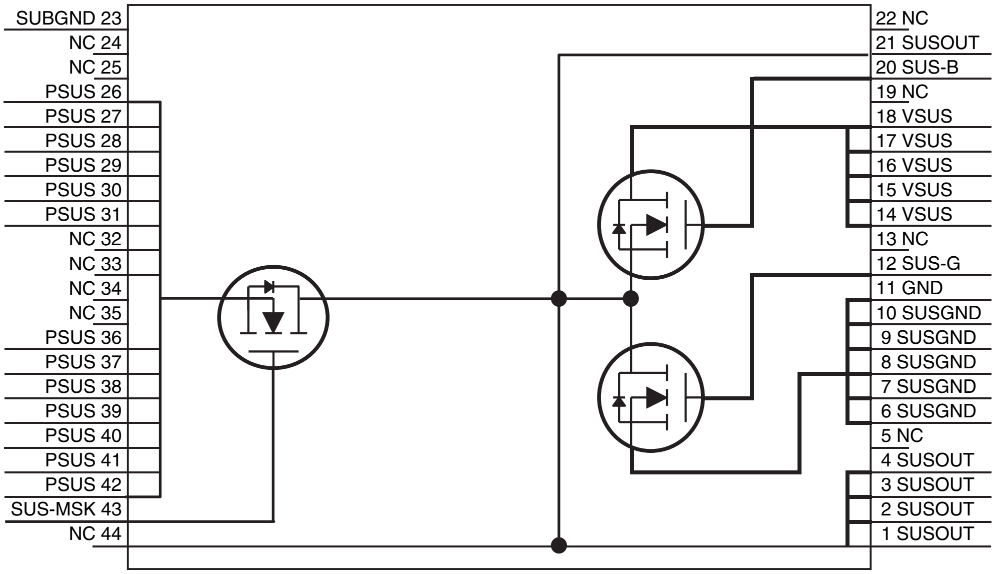
● Pin Function

PIN No.	NAME	I/O	FUNCTION
1	SUS-D	I	SUS-D signal terminal
2	PC	O	PC terminal (center point capacitor potential)
4	PC	O	PC terminal (center point capacitor potential)
5	PC	O	PC terminal (center point capacitor potential)
6	PC	O	PC terminal (center point capacitor potential)
7	PC	O	PC terminal (center point capacitor potential)
14	SUSOUT	O	SUSOUT output terminal
15	SUSOUT	O	SUSOUT output terminal
16	SUSOUT	O	SUSOUT output terminal
17	SUSOUT	O	SUSOUT output terminal
19	SUSOUT	O	SUSOUT output terminal
20	SUS-U	I	SUS-U signal terminal
22	PD-U	O	PD-U terminal
23	SUBGND	I	GND fixed terminal
26	PL-U	O	PL-U terminal
27	PL-U	O	PL-U terminal
28	PL-U	O	PL-U terminal
29	PL-U	O	PL-U terminal
34	PL-D1	O	PL-D1 terminal
35	PL-D1	O	PL-D1 terminal
36	PL-D1	O	PL-D1 terminal
37	PL-D1	O	PL-D1 terminal
41	PL-D2	O	PL-D2 terminal
42	PL-D2	O	PL-D2 terminal
43	PL-D2	O	PL-D2 terminal
44	PL-D2	O	PL-D2 terminal

AXF1160 (50FHD X DRIVE ASSY : IC1203, IC1205)

- X MASK MOD.

Block Diagram


SUBGND 23
NC 24
NC 25
PSUS 26
PSUS 27
PSUS 28
PSUS 29
PSUS 30
PSUS 31
NC 32
NC 33
NC 34
NC 35
PSUS 36
PSUS 37
PSUS 38
PSUS 39
PSUS 40
PSUS 41
PSUS 42
SUS-MSK 43
NC 44
22 NC
21 SUSOUT
20 SUS-B
19 NC
18 VSUS
17 VSUS
16 VSUS
15 VSUS
14 VSUS
13 NC
12 SUS-G
11 GND
10 SUSGND
9 SUSGND
8 SUSGND
7 SUSGND
6 SUSGND
5 NC
4 SUSOUT
3 SUSOUT
2 SUSOUT
1 SUSOUT

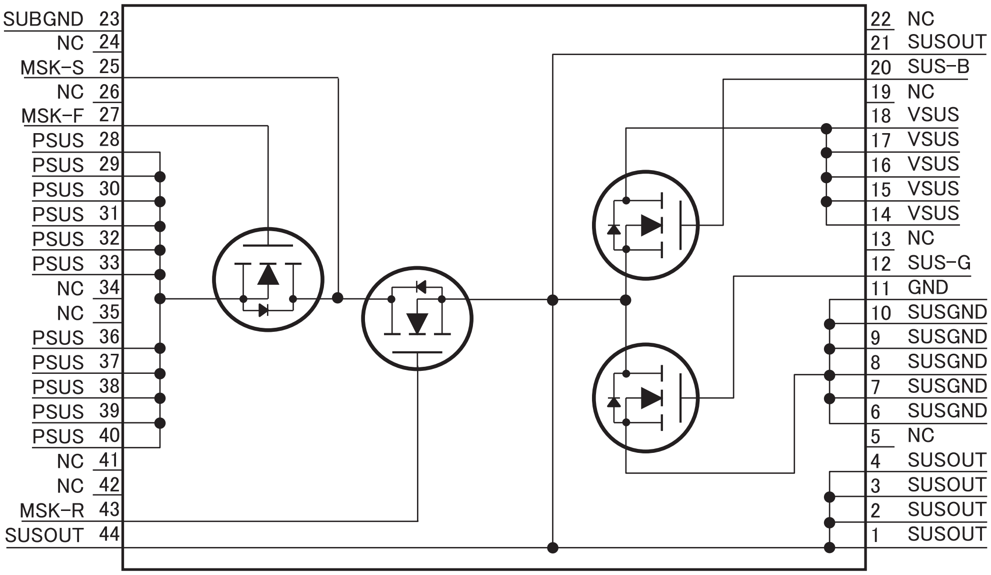
Pin Function

PIN No.	NAME	I/O	FUNCTION
1	SUSOUT	O	SUSOUT output terminal
2	SUSOUT	O	SUSOUT output terminal
3	SUSOUT	O	SUSOUT output terminal
4	SUSOUT	O	SUSOUT output terminal
6	SUSGND	-	SUSGND terminal
7	SUSGND	-	SUSGND terminal
8	SUSGND	-	SUSGND terminal
9	SUSGND	-	SUSGND terminal
10	SUSGND	-	SUSGND terminal
11	GND	-	GND terminal
12	SUS-G	I	SUS-G signal terminal
14	VSUS	I	VSUS power terminal
15	VSUS	I	VSUS power terminal
16	VSUS	I	VSUS power terminal
17	VSUS	I	VSUS power terminal
18	VSUS	I	VSUS power terminal
20	SUS-B	I	SUS-B signal terminal
21	SUSOUT	O	SUSOUT terminal
23	SUBGND	-	GND fixed terminal
26	PSUS	O	PSUS terminal
27	PSUS	O	PSUS terminal
28	PSUS	O	PSUS terminal
29	PSUS	O	PSUS terminal
30	PSUS	O	PSUS terminal
31	PSUS	O	PSUS terminal
36	PSUS	O	PSUS terminal
37	PSUS	O	PSUS terminal
38	PSUS	O	PSUS terminal
39	PSUS	O	PSUS terminal
40	PSUS	O	PSUS terminal
41	PSUS	O	PSUS terminal
42	PSUS	O	PSUS terminal
43	SUS-MSK	I	SUS-MSK signal terminal

■ AXF1161 (FHD Y DRIVE ASSY: IC2301, IC2302)

- Y Mask Mod.

● Block Diagram


SUBGND 23
NC 24
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NC 26
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PSUS 28
PSUS 29
PSUS 30
PSUS 31
PSUS 32
PSUS 33
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NC 35
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PSUS 38
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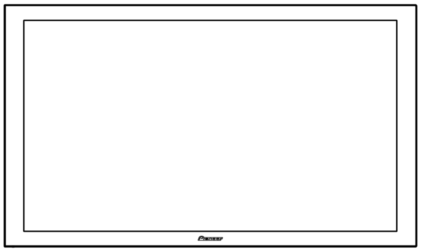
22 NC
21 SUSOUT
20 SUS-B
19 NC
18 VSUS
17 VSUS
16 VSUS
15 VSUS
14 VSUS
13 NC
12 SUS-G
11 GND
10 SUSGND
9 SUSGND
8 SUSGND
7 SUSGND
6 SUSGND
5 NC
4 SUSOUT
3 SUSOUT
2 SUSOUT
1 SUSOUT

● Pin Function

PIN No.	NAME	I/O	FUNCTION
1	SUSOUT	O	SUSOUT output terminal
2	SUSOUT	O	SUSOUT output terminal
3	SUSOUT	O	SUSOUT output terminal
4	SUSOUT	O	SUSOUT output terminal
6	SUSGND	-	SUSGND terminal
7	SUSGND	-	SUSGND terminal
8	SUSGND	-	SUSGND terminal
9	SUSGND	-	SUSGND terminal
10	SUSGND	-	SUSGND terminal
11	GND	-	GND terminal
12	SUS-G	I	SUS-G signal terminal
14	VSUS	I	VSUS power terminal
15	VSUS	I	VSUS power terminal
16	VSUS	I	VSUS power terminal
17	VSUS	I	VSUS power terminal
18	VSUS	I	VSUS power terminal
20	SUS-B	I	SUS-B signal terminal
21	SUSOUT	-	SUSOUT output terminal
23	SUBGND	-	GND fixed terminal
25	MSK-S	I	MSK-S signal terminal
27	MSK-F	I	MSK-F signal terminal
28	PSUS	-	PSUS output terminal
29	PSUS	-	PSUS output terminal
30	PSUS	-	PSUS output terminal
31	PSUS	-	PSUS output terminal
32	PSUS	-	PSUS output terminal
33	PSUS	-	PSUS output terminal
36	PSUS	-	PSUS output terminal
37	PSUS	-	PSUS output terminal
38	PSUS	-	PSUS output terminal
39	PSUS	-	PSUS output terminal
40	PSUS	-	PSUS output terminal
43	MSK-R	I	MSK-R signal terminal
44	SUSOUT	-	SUSOUT output terminal

Pioneer sound.vision.soul

Service Manual



PDP-5000EX

ORDER NO.
ARP3345

PLASMA DISPLAY

PDP-5000EX

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-5000EX	TYV5	AC 110 to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-5000EX/TYV5	ARP3344	EXPLODED VIEWS, BLOCK DIAGRAM, PCB PARTS LIST, ADJUSTMENT, DIAGNOSIS, IC INFORMATION etc.

For details, refer to "Important Check Points for good servicing".

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PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

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T-ZZY SEPT. 2006 printed in Japan

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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  1.39 FHD MAIN ASSY (5/16) 88
  1.40 FHD MAIN ASSY (6/16) 90
  1.41 FHD MAIN ASSY (7/16) 94
  1.42 FHD MAIN ASSY (8/16) 96
  1.43 FHD MAIN ASSY (9/16) 100
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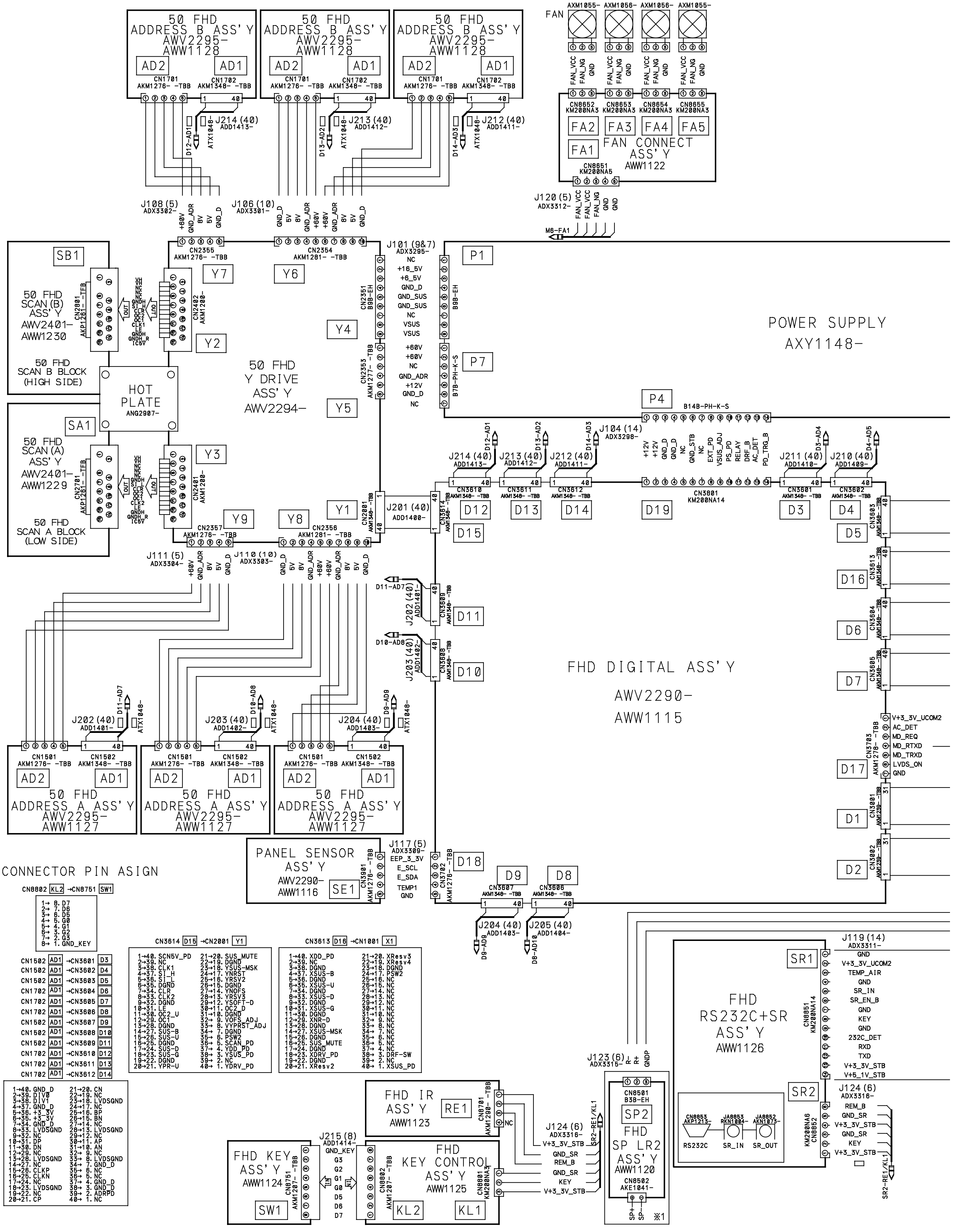
1. SCHEMATIC DIAGRAM

1.1 OVERALL CONNECTION DIAGRAM


50 FHD ADDRESS B ASS'Y AWV2295- AWW1128
AD2
AD1
CN1701 AKM1276- -TBB
CN1702 AKM1348- -TBB
J214 (40) ADD1413-
J213 (40) ADD1412-
J212 (40) ADD1411-
ATX1048-
D12-AD1
D13-AD2
D14-AD3
FAN
AXM1055-
AXM1056-
FAN_VCC
FAN_NG
GND
CN8652 KM200NA3
CN8653 KM200NA3
CN8654 KM200NA3
CN8655 KM200NA3
FA1
FA2
FA3
FA4
FA5
FAN CONNECT ASS'Y AWW1122
CN8651 KM200NA5
J120 (5) ADX3312-
M6-FA1
J108 (5) ADX3302-
J106 (10) ADX3301-
+60V
GND_ADR
8V
5V
GND_D
CN2355 AKM1276- -TBB
CN2354 AKM1281- -TBB
J101 (9&7) ADX3295-
NC
+16_5V
+6_5V
GND_SUS
VSUS
+12V
CN2351 B9B-EH
CN2353 AKM1277- -TBB
B9B-EH
B7B-PH-K-S
P1
P7
P4
B14B-PH-K-S
POWER SUPPLY AXY1148-
SB1
50 FHD SCAN (B) ASS'Y AWV2401- AWW1230
CN2801 AKP1261- -TFB
CN2402 AKM1280-
50 FHD SCAN B BLOCK (HIGH SIDE)
HOT PLATE ANG2907-
SA1
50 FHD SCAN (A) ASS'Y AWV2401- AWW1229
CN2701 AKP1261- -TFB
CN2401 AKM1280-
50 FHD SCAN A BLOCK (LOW SIDE)
IOUT
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
Y9
50 FHD Y DRIVE ASS'Y AWV2294-
CN2357 AKM1276- -TBB
CN2356 AKM1281- -TBB
CN2001 AKM1348- -TBB
J201 (40) ADD1400-
J111 (5) ADX3304-
J110 (10) ADX3303-
J104 (14) ADX3298-
STB
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRG_B
J211 (40) ADD1410-
J210 (40) ADD1409-
D3-AD4
D4-AD5
CN3610 AKM1348- -TBB
CN3611 AKM1348- -TBB
CN3612 AKM1348- -TBB
CN3801 KM200NA14
CN3601 AKM1348- -TBB
CN3602 AKM1348- -TBB
CN3603
CN3613
CN3604
CN3605
CN3614
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D11-AD7
D10-AD8
J202 (40) ADD1401-
J203 (40) ADD1402-
CN3609 AKM1348- -TBB
CN3608 AKM1348- -TBB
FHD DIGITAL ASS'Y AWV2290- AWW1115
CN3703 AKM1278- -TBB
V+3_3V_UCOM2
MD_REQ
MD_RTXD
MD_TRXD
LVDS_ON
CN3001 AKM1239- -TBB
CN3002 AKM1239- -TBB
D9-AD9
J204 (40) ADD1403-
J205 (40) ADD1404-
D8-AD10
CN1501 AKM1276- -TBB
CN1502 AKM1348- -TBB
50 FHD ADDRESS A ASS'Y AWV2295- AWW1127
PANEL SENSOR ASS'Y AWV2290- AWW1116
SE1
CN3901 AKM1276- -TBB
J117 (5) ADX3309-
EEP_3_3V
E_SCL
E_SDA
TEMP1
CN3702 AKM1276- -TBB
CN3607 AKM1348- -TBB
CN3606 AKM1348- -TBB
J119 (14) ADX3311-
SR1
FHD RS232C+SR ASS'Y AWW1126
CN8851 KM200NA14
TEMP_AIR
SR_IN
SR_EN_B
KEY
232C_DET
RXD
TXD
V+3_3V_STB
V+5_1V_STB
CN8853 AKP1213-
JA8853 RKN1004-
JA8852 AKN1073-
RS232C
SR_IN
SR_OUT
SR2
CN8852 KM200NA6
J124 (6) ADX3316-
REM_B
GND_SR
SR2-RE1/KL1
J123 (6) ADX3315-
R-
R+
GNDP
CN8501 B3B-EH
SP2
FHD SP LR2 ASS'Y AWW1120
CN8502 AKE1041-
SP+
SP-
※1
FHD IR ASS'Y AWW1123
RE1
CN8701 AKM1290- -TBB
NC
J215 (8) ADD1414-
GND_KEY
G3
G2
G1
G0
D5
D6
D7
FHD KEY ASS'Y AWW1124
SW1
CN8751 AKM1207- -TBB
FHD KEY CONTROL ASS'Y AWW1125
CN8802 AKM1207- -TBB
CN8801 KM200NA7
KL2
KL1

CONNECTOR PIN ASIGN

CN8802 KL2 →CN8751 SW1

1→ 8. D7
2→ 7. D6
3→ 6. D5
4→ 5. G0
5→ 4. G1
6→ 3. G2
7→ 2. G3
8→ 1. GND_KEY

CN1502 AD1 →CN3601 D3
CN1502 AD1 →CN3602 D4
CN1502 AD1 →CN3603 D5
CN1702 AD1 →CN3604 D6
CN1702 AD1 →CN3605 D7
CN1702 AD1 →CN3606 D8
CN1502 AD1 →CN3607 D9
CN1502 AD1 →CN3608 D10
CN1502 AD1 →CN3609 D11
CN1702 AD1 →CN3610 D12
CN1702 AD1 →CN3611 D13
CN1702 AD1 →CN3612 D14

1→40. GND_D
2→39. DIV0
3→38. DIV1
4→37. GND_D
5→36. +3_3V
6→35. +3_3V
7→34. GND_D
8→33. LVDSGND
9→32. NC
10→31. DP
11→30. DN
12→29. NC
13→28. LVDSGND
14→27. NC
15→26. CLKP
16→25. CLKN
17→24. NC
18→23. LVDSGND
19→22. NC
20→21. CP
21→20. CN
22→19. NC
23→18. LVDSGND
24→17. NC
25→16. BP
26→15. BN
27→14. NC
28→13. LVDSGND
29→12. NC
30→11. AP
31→10. AN
32→ 9. NC
33→ 8. LVDSGND
34→ 7. GND_D
35→ 6. NC
36→ 5. NC
37→ 4. GND_D
38→ 3. GND_D
39→ 2. ADRPD
40→ 1. NC

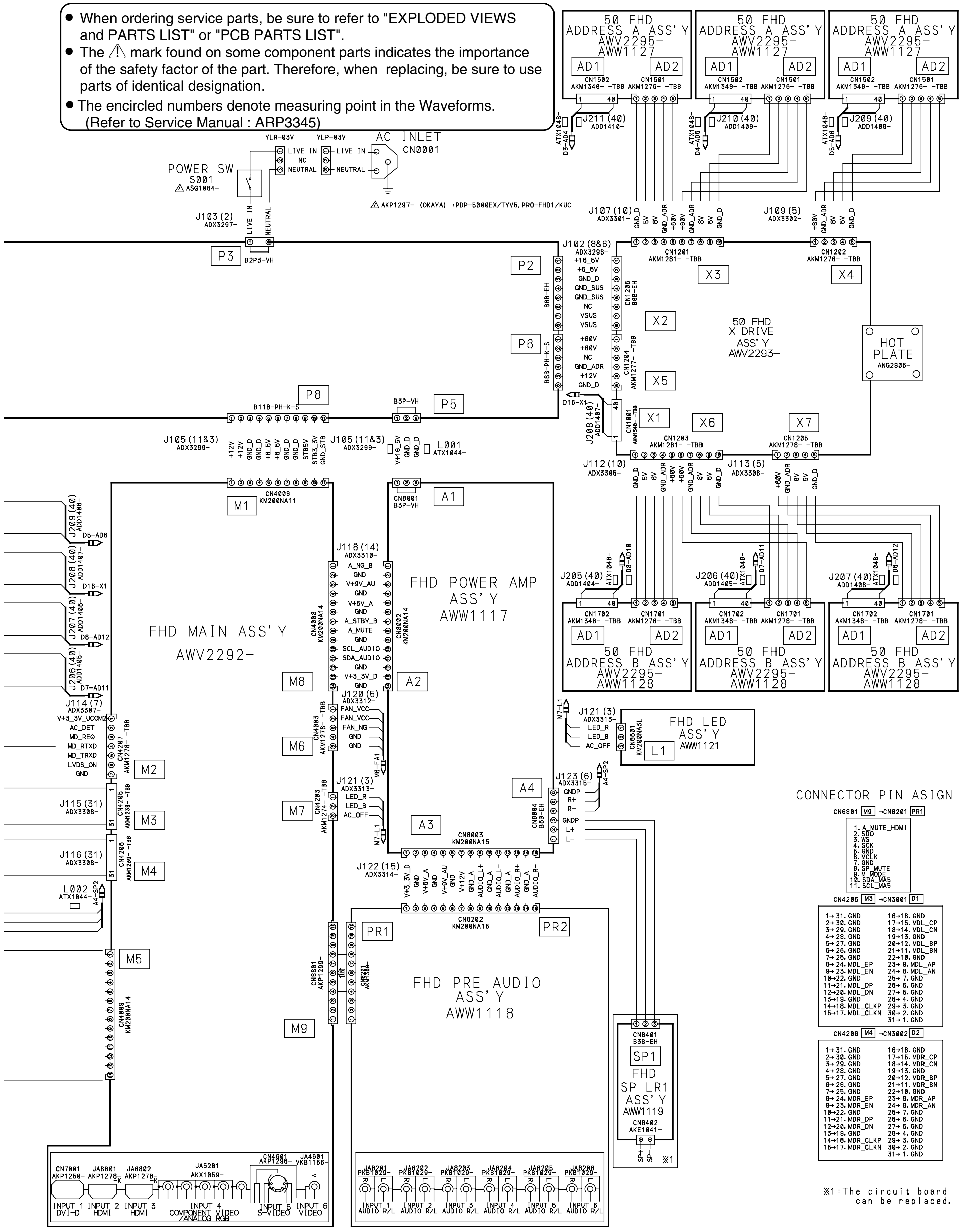
CN3614 D15 →CN2001 Y1

1→40. SCN5V_PD
2→39. NC
3→38. CLK1
4→37. SI_H
5→36. SI_L
6→35. DGND
7→34. CLR
8→33. CLK2
9→32. DGND
10→31. LE
11→30. OC2_U
12→29. OC1
13→28. DGND
14→27. SUS-B
15→26. SUS-U
16→25. DGND
17→24. SUS-D
18→23. SUS-G
19→22. DGND
20→21. YPR-U
21→20. SUS_MUTE
22→19. DGND
23→18. YSUS-MSK
24→17. YNRST
25→16. YRSV2
26→15. DGND
27→14. YNOFS
28→13. YRSV3
29→12. YSOFT-D
30→11. OC2_D
31→10. DGND
32→ 9. VOFS_ADJ
33→ 8. VYPRST_ADJ
34→ 7. DGND
35→ 6. PSW2
36→ 5. SCAN_PD
37→ 4. YDD_PD
38→ 3. YSUS_PD
39→ 2. NC
40→ 1. YDRV_PD

CN3613 D16 →CN1001 X1

1→40. XDD_PD
2→39. NC
3→38. DGND
4→37. XSUS-B
5→36. DGND
6→35. XSUS-U
7→34. DGND
8→33. XSUS-D
9→32. DGND
10→31. XSUS-G
11→30. DGND
12→29. XNR-D
13→28. DGND
14→27. XSUS-MSK
15→26. DGND
16→25. SUS_MUTE
17→24. DGND
18→23. XDRV_PD
19→22. DGND
20→21. XResv2
21→20. XResv3
22→19. XResv4
23→18. DGND
24→17. PSW2
25→16. NC
26→15. NC
27→14. NC
28→13. NC
29→12. NC
30→11. NC
31→10. NC
32→ 9. NC
33→ 8. NC
34→ 7. NC
35→ 6. NC
36→ 5. NC
37→ 4. NC
38→ 3. DRF-SW
39→ 2. NC
40→ 1. XSUS_PD

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- The encircled numbers denote measuring point in the Waveforms. (Refer to Service Manual : ARP3345)



50 FHD ADDRESS A ASS'Y AWV2295- AWW1127
AD1
AD2
CN1502 AKM1348- -TBB
CN1501 AKM1276- -TBB
J211 (40) ADD1410-
J210 (40) ADD1409-
J209 (40) ADD1408-
POWER SW S001 ⚠ ASG1084-
YLR-03V
YLP-03V
LIVE IN
NC
NEUTRAL
AC INLET CN0001
⚠ AKP1297- (OKAYA) : PDP-5000EX/TYV5, PRO-FHD1/KUC
J103 (2) ADX3297-
P3
B2P3-VH
J107 (10) ADX3301-
J109 (5) ADX3302-
J102 (8&6) ADX3298-
+16_5V
+6_5V
GND_D
GND_SUS
NC
VSUS
+60V
GND_ADR
+12V
P2
P6
CN1201 AKM1281- -TBB
CN1202 AKM1276- -TBB
CN1206 B8B-EH
CN1204 AKM1277- -TBB
X1
X2
X3
X4
X5
X6
X7
50 FHD X DRIVE ASS'Y AWV2293-
HOT PLATE ANG2906-
CN1001 AKM1348- -TBB
J208 (40) ADD1407-
D16-X1
CN1203 AKM1281- -TBB
CN1205 AKM1276- -TBB
J112 (10) ADX3305-
J113 (5) ADX3306-
P8
P5
B11B-PH-K-S
B3P-VH
J105 (11&3) ADX3299-
L001 ATX1044-
M1
CN4006 KM200NA11
A1
CN8001 B3P-VH
FHD MAIN ASS'Y AWV2292-
FHD POWER AMP ASS'Y AWW1117
J118 (14) ADX3310-
A_NG_B
V+9V_AU
V+5V_A
A_STBY_B
A_MUTE
SCL_AUDIO
SDA_AUDIO
V+3_3V_D
CN4008 KM200NA14
CN8002 KM200NA14
J205 (40) ADD1404-
J206 (40) ADD1405-
J207 (40) ADD1406-
CN1702 AKM1348- -TBB
CN1701 AKM1276- -TBB
50 FHD ADDRESS B ASS'Y AWV2295- AWW1128
J114 (7) ADX3307-
V+3_3V_UCOM2
AC_DET
MD_REQ
MD_RTXD
MD_TRXD
LVDS_ON
CN4207 AKM1278- -TBB
M2
J115 (31) ADX3308-
CN4205 AKM1239- -TBB
M3
J116 (31) ADX3308-
CN4206 AKM1239- -TBB
M4
L002 ATX1044-
M5
CN4009 KM200NA14
M6
M7
M8
M9
A2
A3
A4
J120 (5) ADX3312-
FAN_VCC
FAN_NG
CN4003 AKM1276- -TBB
J121 (3) ADX3313-
LED_R
LED_B
AC_OFF
CN4203 AKM1274- -TBB
FHD LED ASS'Y AWW1121
CN8801 KM200NA3L
L1
J123 (6) ADX3315-
GNDP
R+
R-
L+
L-
CN8004 B6B-EH
CN8003 KM200NA15
J122 (15) ADX3314-
AUDIO_L+
AUDIO_L-
AUDIO_R+
AUDIO_R-
CN8202 KM200NA15
PR1
PR2
CN6801 AKP1298-
CN8201 AKM1350-
FHD PRE AUDIO ASS'Y AWW1118
CN8401 B3B-EH
SP1
FHD SP LR1 ASS'Y AWW1119
CN8402 AKE1041-
SP+
SP-
※1
CN7001 AKP1250-
JA6801 AKP1278-
JA6802 AKP1278-
JA5201 AKX1059-
CN4601 AKP1298-
JA4601 VKB1156-
INPUT 1 DVI-D
INPUT 2 HDMI
INPUT 3 HDMI
INPUT 4 COMPONENT VIDEO /ANALOG RGB
INPUT 5 S-VIDEO
INPUT 6 VIDEO
JA8201 PKB1029-
JA8202 PKB1029-
JA8203 PKB1029-
JA8204 PKB1029-
JA8205 PKB1029-
JA8206 PKB1029-
INPUT 1 AUDIO R/L
INPUT 2 AUDIO R/L
INPUT 3 AUDIO R/L
INPUT 4 AUDIO R/L
INPUT 5 AUDIO R/L
INPUT 6 AUDIO R/L

CONNECTOR PIN ASIGN

CN6801 M9 →CN8201 PR1

1. A_MUTE_HDMI
2. SDO
3. WS
4. SCK
5. GND
6. MCLK
7. GND
8. SP_MUTE
9. M_MODE
10. SDA_MA5
11. SCL_MA5

CN4205 M3 →CN3001 D1

1→ 31. GND	16→16. GND
2→ 30. GND	17→15. MDL_CP
3→ 29. GND	18→14. MDL_CN
4→ 28. GND	19→13. GND
5→ 27. GND	20→12. MDL_BP
6→ 26. GND	21→11. MDL_BN
7→ 25. GND	22→10. GND
8→ 24. MDL_EP	23→ 9. MDL_AP
9→ 23. MDL_EN	24→ 8. MDL_AN
10→22. GND	25→ 7. GND
11→21. MDL_DP	26→ 6. GND
12→20. MDL_DN	27→ 5. GND
13→19. GND	28→ 4. GND
14→18. MDL_CLKP	29→ 3. GND
15→17. MDL_CLKN	30→ 2. GND
	31→ 1. GND

CN4206 M4 →CN3002 D2

1→ 31. GND	16→16. GND
2→ 30. GND	17→15. MDR_CP
3→ 29. GND	18→14. MDR_CN
4→ 28. GND	19→13. GND
5→ 27. GND	20→12. MDR_BP
6→ 26. GND	21→11. MDR_BN
7→ 25. GND	22→10. GND
8→ 24. MDR_EP	23→ 9. MDR_AP
9→ 23. MDR_EN	24→ 8. MDR_AN
10→22. GND	25→ 7. GND
11→21. MDR_DP	26→ 6. GND
12→20. MDR_DN	27→ 5. GND
13→19. GND	28→ 4. GND
14→18. MDR_CLKP	29→ 3. GND
15→17. MDR_CLKN	30→ 2. GND
	31→ 1. GND

※1 : The circuit board can be replaced.

1.2 50FHD ADDRESS A ASSY (1/3)

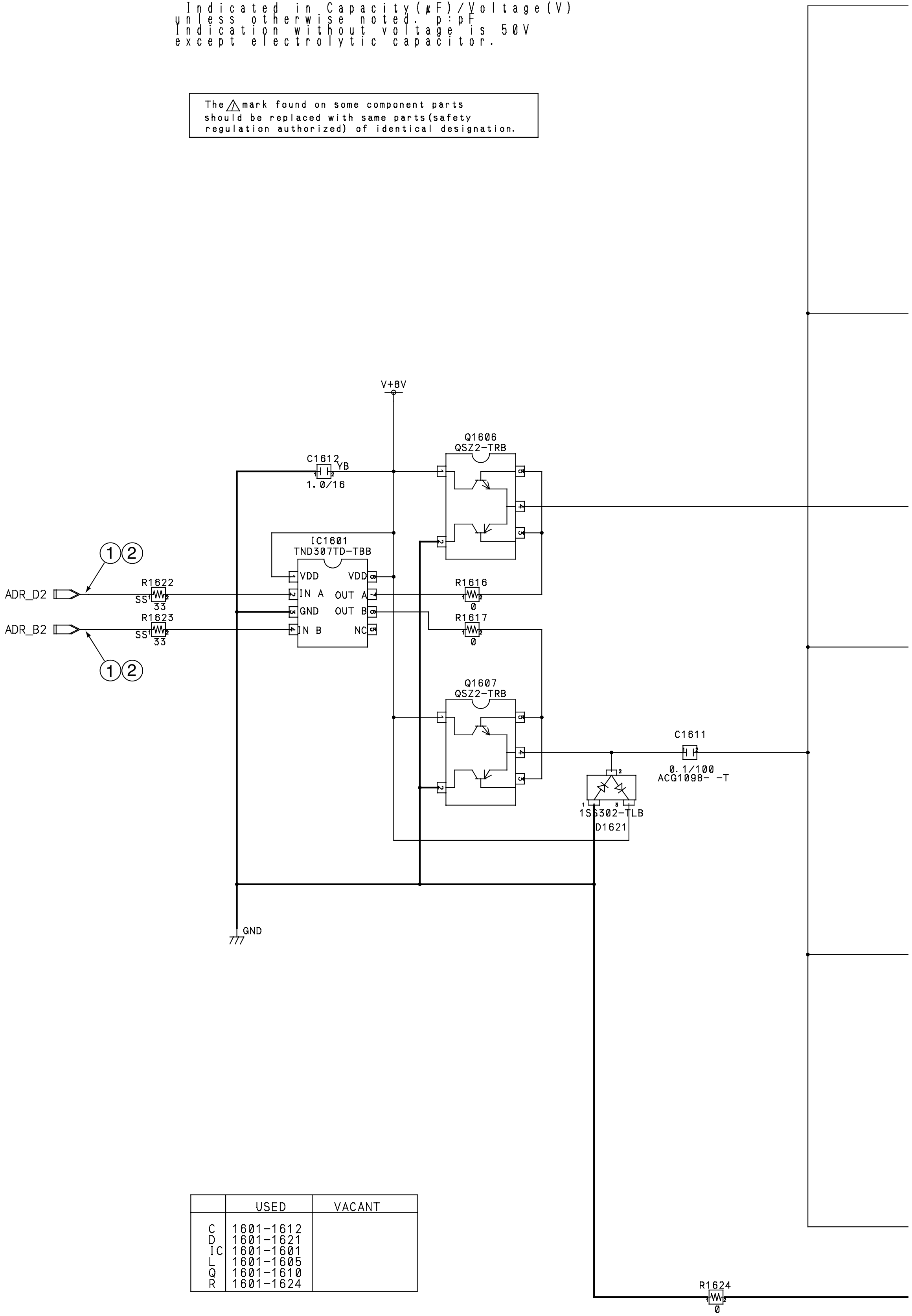
50FHD ADDRESS A ASSY (1/3)

- ADDRESS RESONANCE BLOCK

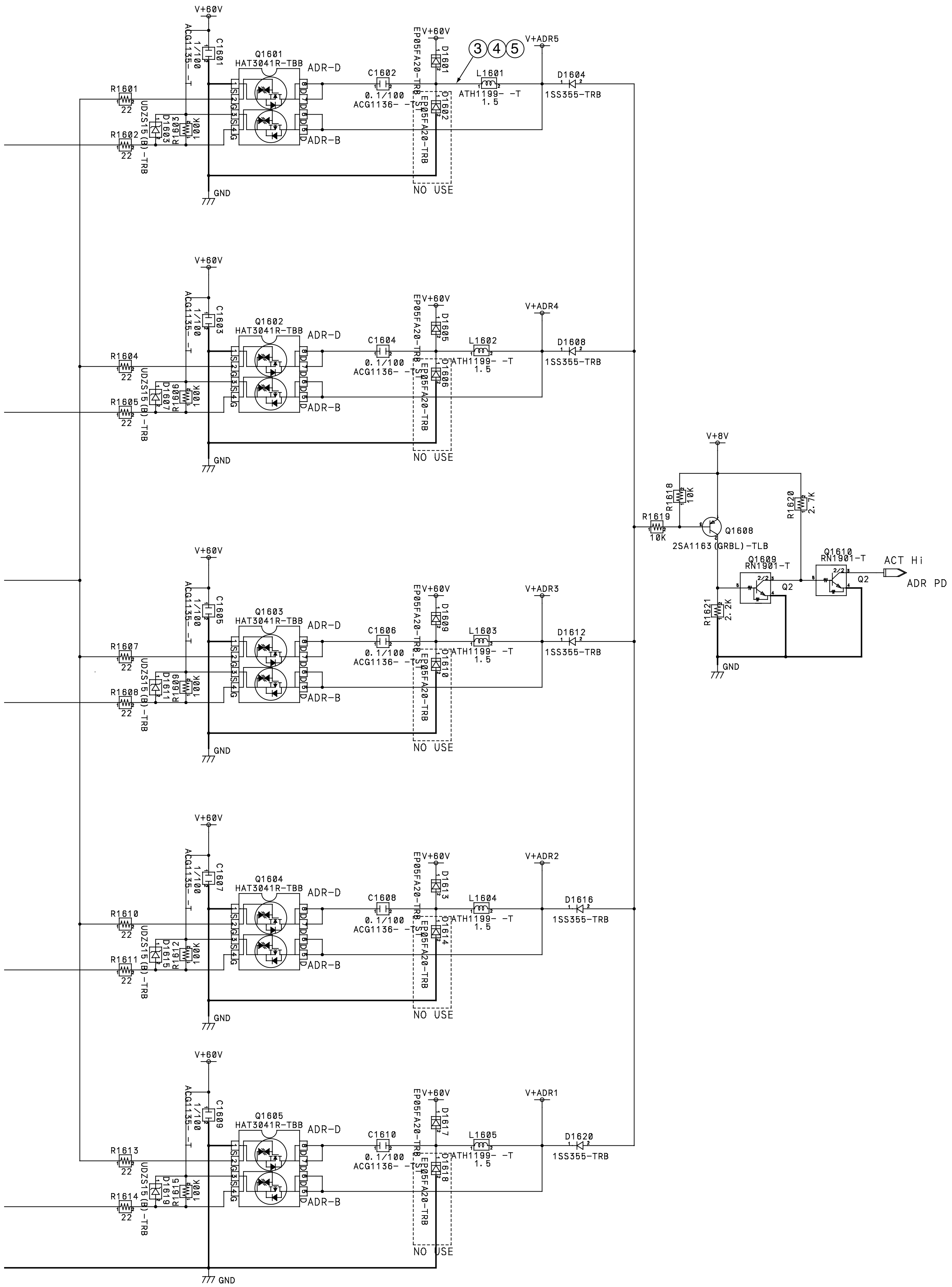
NO USE

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k : kΩ, M : MΩ.
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p : pF
Indication without voltage is 50V
except electrolytic capacitor.

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.


V+8V
Q1606
QSZ2-TRB
C1612
YB
1.0/16
IC1601
TND307TD-TBB
VDD
IN A
GND
IN B
VDD
OUT A
OUT B
NC
①②
ADR_D2
ADR_B2
R1622
SS
33
R1623
SS
33
①②
R1616
0
R1617
0
Q1607
QSZ2-TRB
C1611
0.1/100
ACG1098- -T
1SS302-TLB
D1621
GND
R1624
0

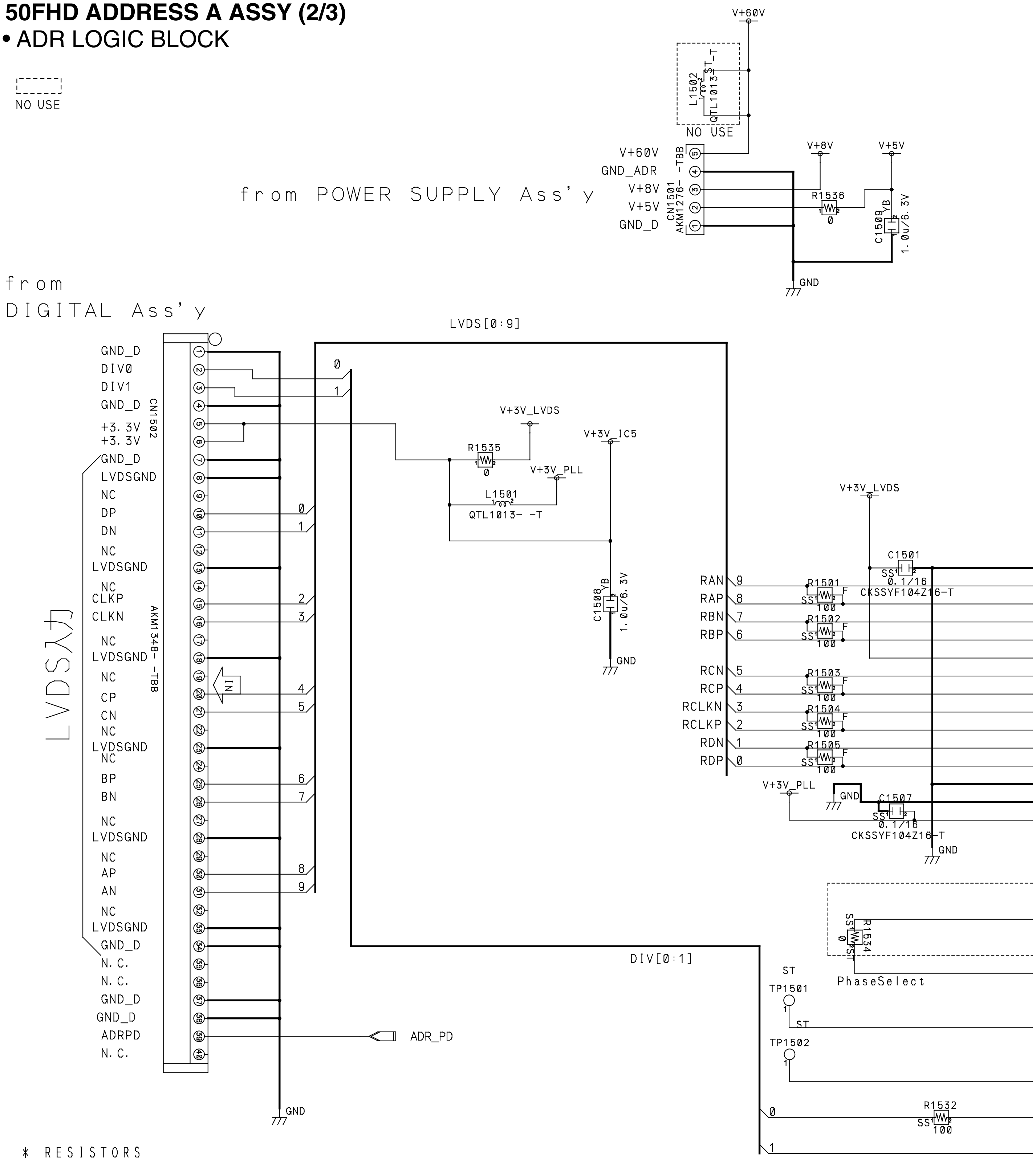
	USED	VACANT
C	1601-1612	
D	1601-1621	
IC	1601-1601	
L	1601-1605	
Q	1601-1610	
R	1601-1624	


V+60V
ACG1135- -T
1/100
C1601
Q1601
HAT3041R-TBB
ADR-D
ADR-B
R1601
22
R1602
22
UDZS15(B)-TRB
D1603
R1603
100k
GND
EP05FA20-TRB
V+60V
D1601
D1602
NO USE
C1602
0.1/100
ACG1136- -T
③④⑤
L1601
ATH1199- -T
1.5
V+ADR5
D1604
1SS355-TRB
C1603
Q1602
R1604
R1605
D1607
R1606
D1605
D1606
C1604
L1602
V+ADR4
D1608
C1605
Q1603
R1607
R1608
D1611
R1609
D1609
D1610
C1606
L1603
V+ADR3
D1612
C1607
Q1604
R1610
R1611
D1615
R1612
D1613
D1614
C1608
L1604
V+ADR2
D1616
C1609
Q1605
R1613
R1614
D1619
R1615
D1617
D1618
C1610
L1605
V+ADR1
D1620
V+8V
R1618
10K
R1619
10K
Q1608
2SA1163(GRBL)-TLB
R1620
2.7K
Q1609
RN1901-T
Q2
Q1610
RN1901-T
Q2
R1621
2.2K
ACT Hi
ADR PD
GND

1.3 50FHD ADDRESS A ASSY (2/3)

50FHD ADDRESS A ASSY (2/3)

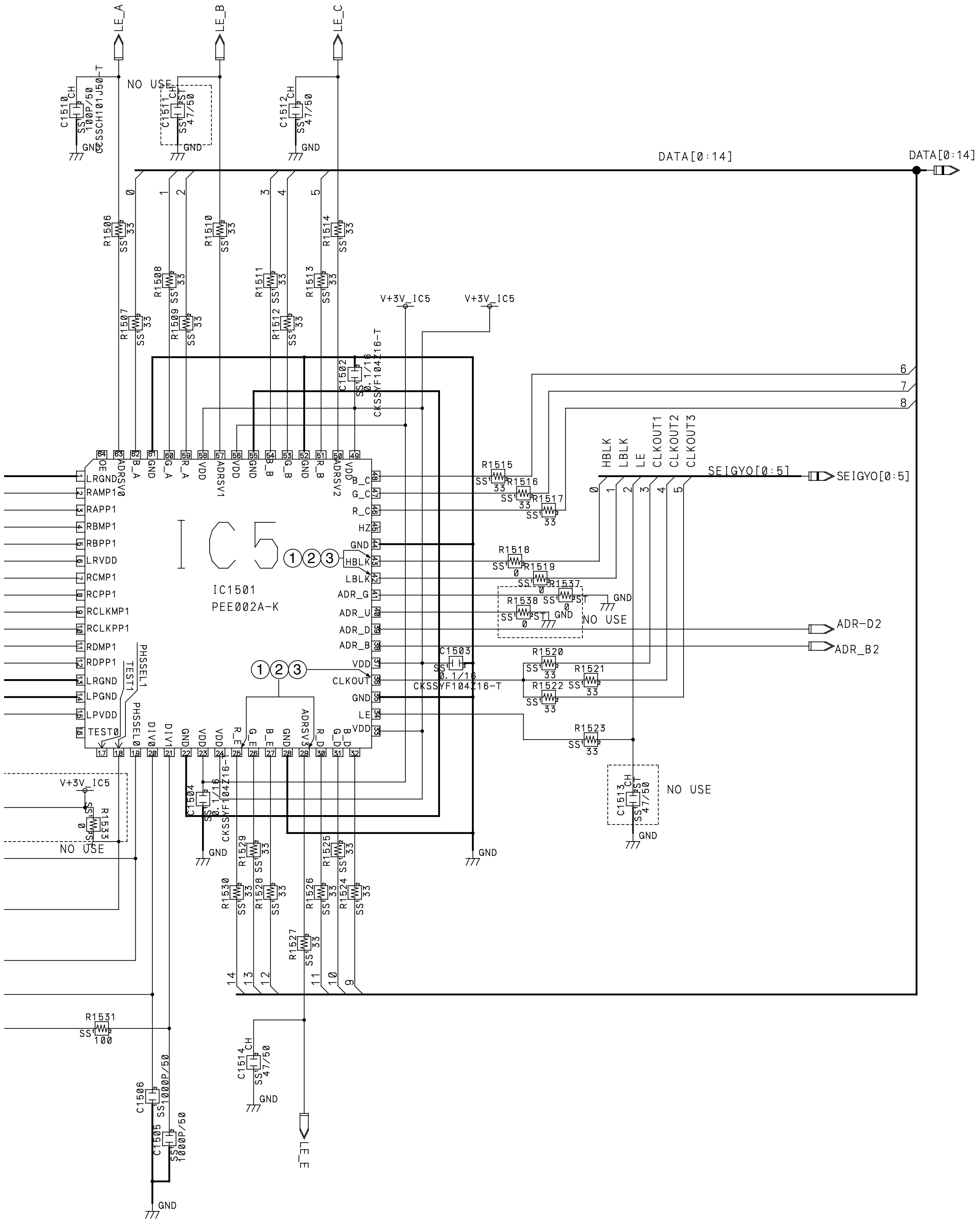
• ADR LOGIC BLOCK


NO USE
V+60V
L1502
QTL1013-ST_T
NO USE
V+60V
GND_ADR
V+8V
V+5V
GND_D
CN1501
AKM1276- -TBB
from POWER SUPPLY Ass'y
V+8V
V+5V
R1536
0
C1509
YB
1.0u/6.3V
GND
B
from
DIGITAL Ass'y
LVDS[0:9]
CN1502
AKM1348- -TBB
GND_D
DIV0
DIV1
GND_D
+3.3V
+3.3V
GND_D
LVDSGND
NC
DP
DN
NC
LVDSGND
NC
CLKP
CLKN
NC
LVDSGND
NC
CP
CN
NC
LVDSGND
NC
BP
BN
NC
LVDSGND
NC
AP
AN
NC
LVDSGND
GND_D
N.C.
N.C.
GND_D
GND_D
ADRPD
N.C.
LVDS入力
IN
ADR_PD
GND
V+3V_LVDS
R1535
0
V+3V_PLL
L1501
QTL1013- -T
V+3V_IC5
C1508
YB
1.0u/6.3V
GND
V+3V_LVDS
C1501
SS
0.1/16
CKSSYF104Z16-T
RAN
RAP
RBN
RBP
RCN
RCP
RCLKN
RCLKP
RDN
RDP
R1501
R1502
R1503
R1504
R1505
SS
100
F
V+3V_PLL
GND
C1507
SS
0.1/16
CKSSYF104Z16-T
GND
R1534
SS
0
ST
PhaseSelect
DIV[0:1]
ST
TP1501
ST
TP1502
R1532
SS
100
C
D
E

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k:kΩ, M:MΩ.
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF
Indication without voltage is 50V
except electrolytic capacitor.

	USED	VACANT
C	1501-1509	
CN	1501-1502	
IC	1501-1501	
L	1501-1502	
R	1501-1538	
TP	1501-1502	

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.



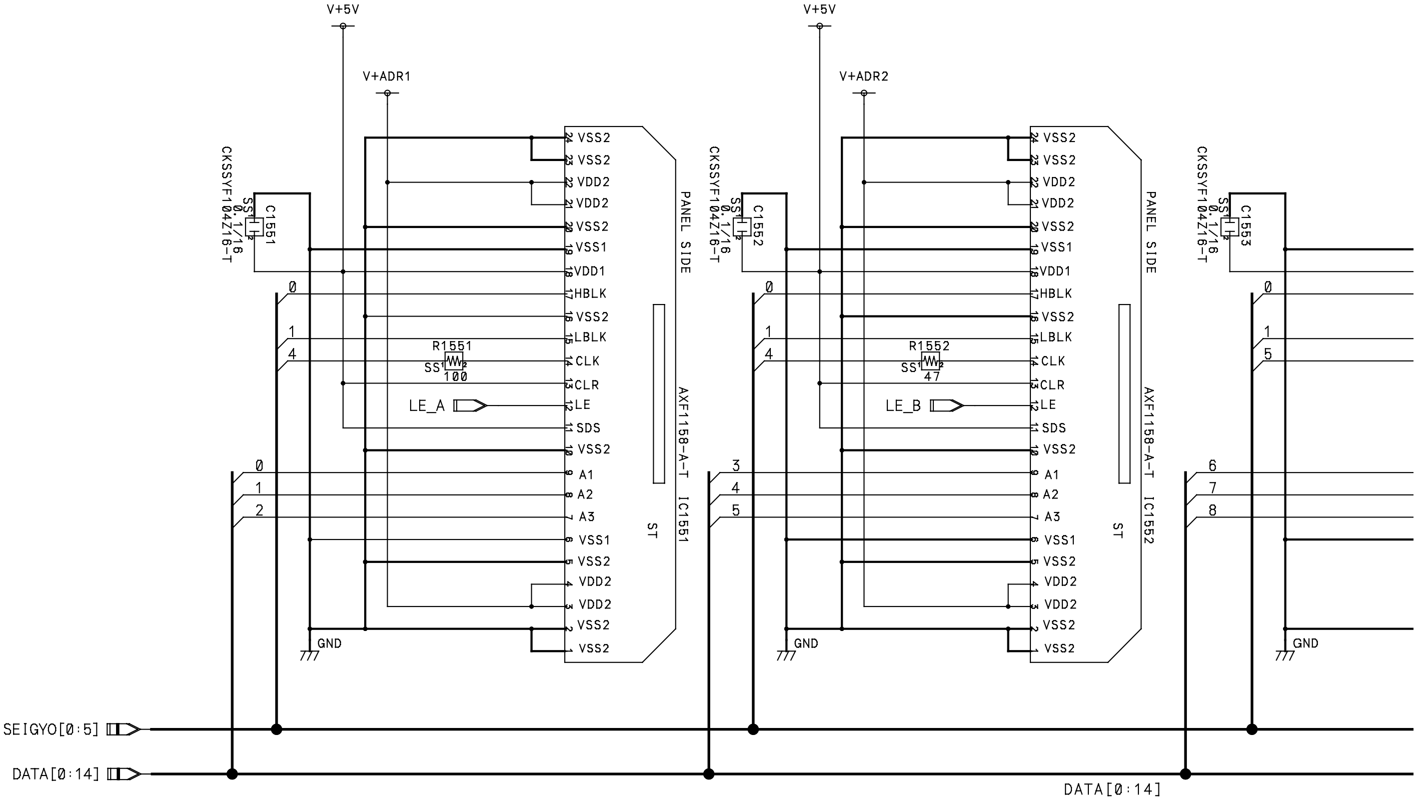
LE_A
LE_B
LE_C
C1510 CH SS 100P/50 CKSSCH101J50-T
NO USE
C1511 CH ST SS 47/50
C1512 CH SS 47/50
GND
DATA[0:14]
DATA[0:14]
R1506 SS 33
R1507 SS 33
R1508 SS 33
R1509 SS 33
R1510 SS 33
R1511 SS 33
R1512 SS 33
R1513 SS 33
R1514 SS 33
V+3V_IC5
V+3V_IC5
C1502 SS 0.1/16 CKSSYF104Z16-T
6
7
8
HBLK
LBLK
LE
CLKOUT1
CLKOUT2
CLKOUT3
SEIGYO[0:5]
SEIGYO[0:5]
R1515 SS 33
R1516 SS 33
R1517 SS 33
R1518 SS 0
R1519 SS 0
R1537 ST 0
R1538 SS ST 0
GND
NO USE
ADR-D2
ADR_B2
IC5
①②③
IC1501
PEE002A-K
OE
ADRSV0
B_A
GND
G_A
R_A
VDD
ADRSV1
VDD
GND
B_B
G_B
GND
R_B
ADRSV2
VDD
LRGND
RAMP1
RAPP1
RBMP1
RBPP1
LRVDD
RCMP1
RCPP1
RCLKMP1
RCLKPP1
RDMP1
RDPP1
LRGND
LPGND
LPVDD
TEST0
PHSSEL1
TEST1
PHSSEL0
DIV0
DIV1
B_C
G_C
R_C
HZ
GND
HBLK
LBLK
ADR_G
ADR_U
ADR_D
ADR_B
VDD
CLKOUT
GND
LE
VDD
GND
VDD
VDD
R_E
G_E
B_E
GND
ADRSV3
R_D
G_D
B_D
C1503 SS 0.1/16 CKSSYF104Z16-T
R1520 SS 33
R1521 SS 33
R1522 SS 33
R1523 SS 33
C1513 CH ST SS 47/50
NO USE
V+3V_IC5
R1533 ST 0
NO USE
C1504 SS 0.1/16 CKSSYF104Z16-T
R1524 SS 33
R1525 SS 33
R1526 SS 33
R1527 SS 33
R1528 SS 33
R1529 SS 33
R1530 SS 33
14 13 12 11 10 9
R1531 SS 100
C1514 CH SS 47/50
C1506 SS 1000P/50
C1505 SS 1000P/50
LE_E

1.4 50FHD ADDRESS A ASSY (3/3)

50FHD ADDRESS A ASSY (3/3)

- ADR CONNECT BLOCK

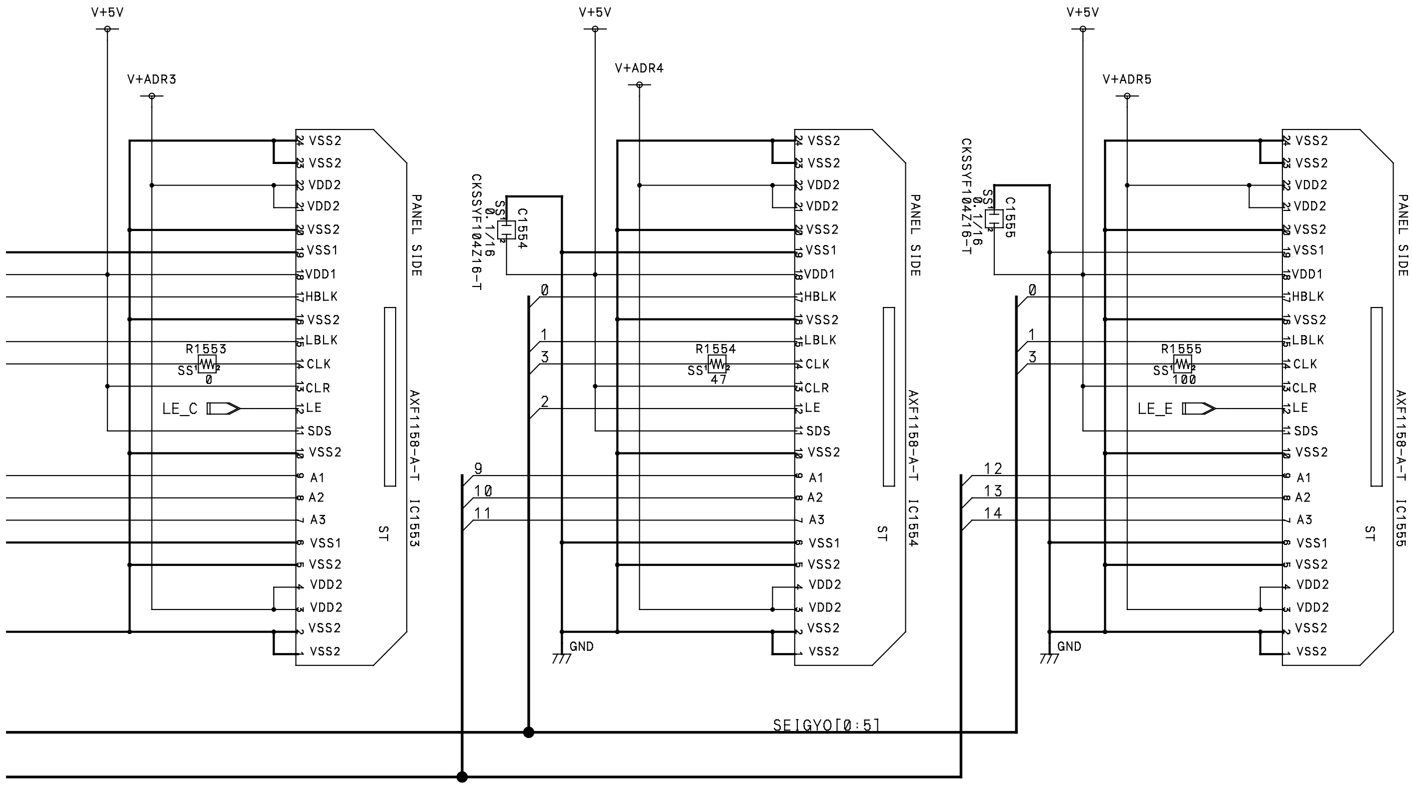
NO USE


V+5V
V+ADR1
V+5V
V+ADR2
CKSSYF104Z16-T
C1551
SS
0.1/16
C1552
C1553
VSS2
VSS2
VDD2
VDD2
VSS2
VSS1
VDD1
HBLK
VSS2
LBLK
CLK
CLR
LE
SDS
VSS2
A1
A2
A3
VSS1
VSS2
VDD2
VDD2
VSS2
VSS2
PANEL SIDE
AXF1158-A-T
IC1551
IC1552
ST
R1551
SS
100
R1552
47
LE_A
LE_B
GND
SEIGYO[0:5]
DATA[0:14]
DATA[0:14]

* RESISTORS
Indicated in Ω,±5%, 1/16W Tolerance
unless otherwise noted,k:kΩ,M:MΩ.
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF
Indication without voltage is 50V
except electrolytic capacitor.

	USED	VACANT
C IC R	1551-1555 1551-1555 1551-1555	

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

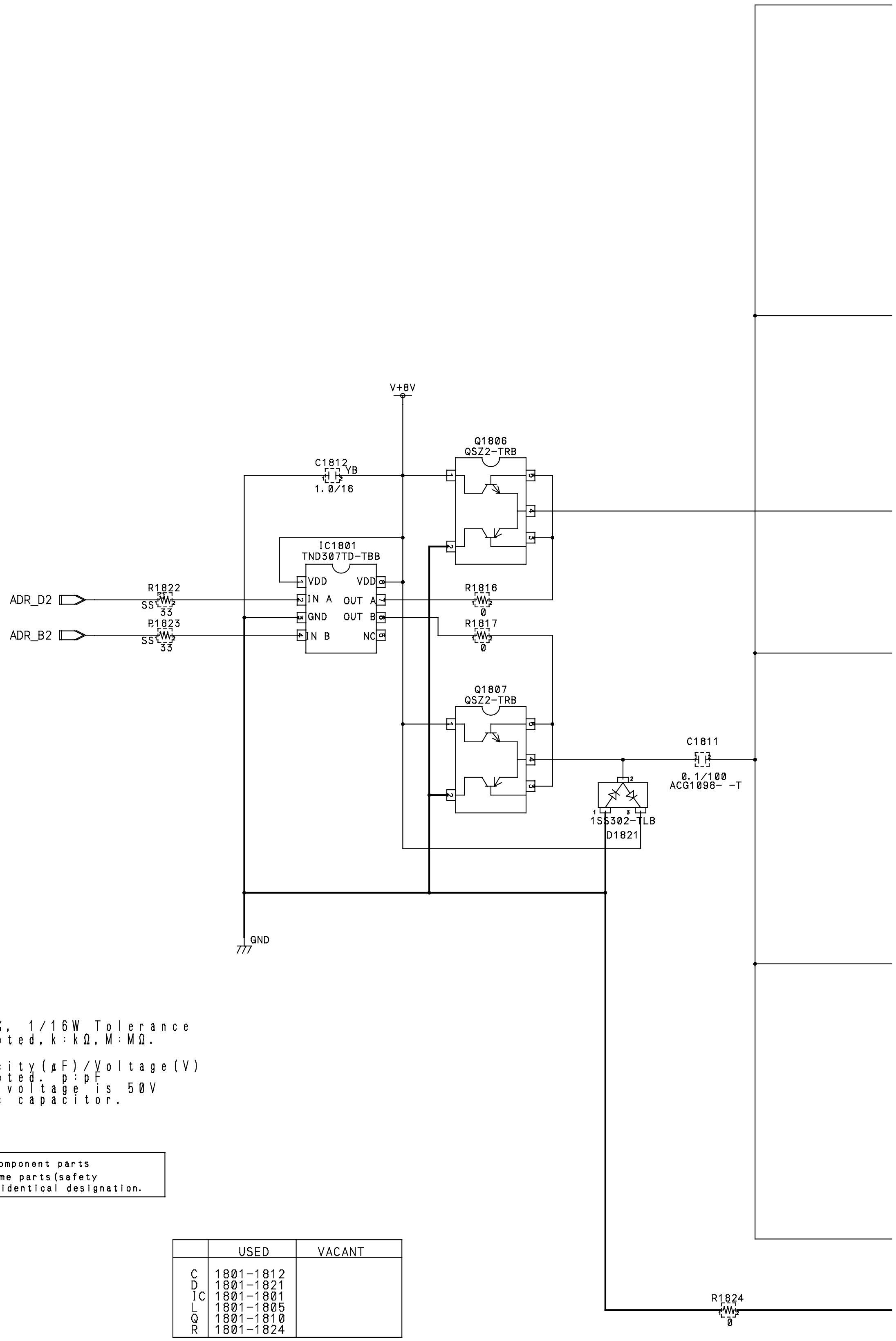

V+5V
V+ADR3
V+ADR4
V+ADR5
VSS2
VSS2
VDD2
VDD2
VSS2
VSS1
VDD1
HBLK
VSS2
LBLK
CLK
CLR
LE
SDS
VSS2
A1
A2
A3
VSS1
VSS2
VDD2
VDD2
VSS2
VSS2
PANEL SIDE
AXF1158-A-T
IC1553
IC1554
IC1555
ST
R1553
SS1/2
0
R1554
47
R1555
100
LE_C
LE_E
C1554
C1555
SS
0.1/16
CKSSYF104Z16-T
GND
0
1
2
3
9
10
11
12
13
14
SEIGYO[0:5]

1.5 50FHD ADDRESS B ASSY (1/3)

50FHD ADDRESS B ASSY (1/3)

- ADDRESS RESONANCE BLOCK

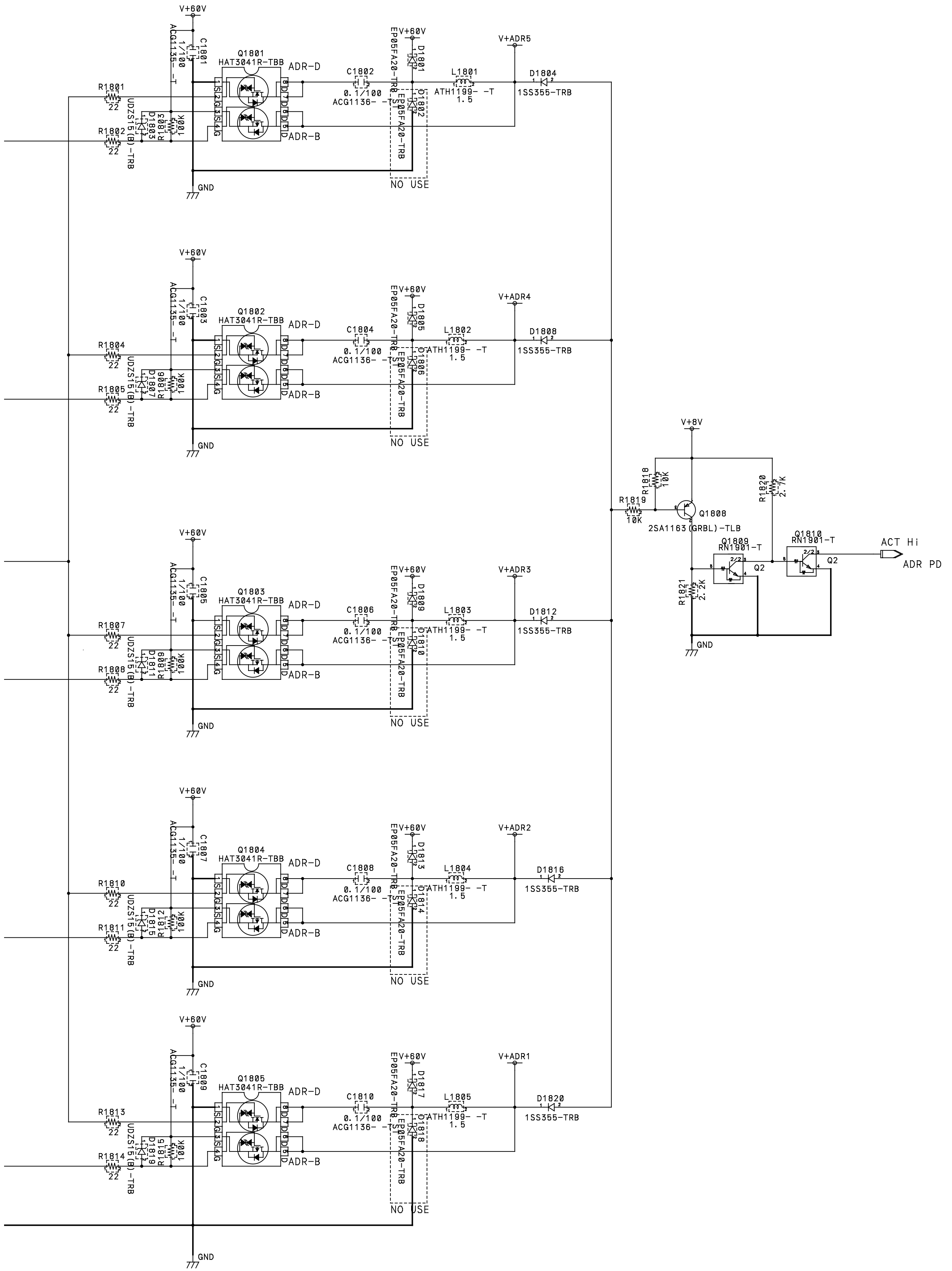
NO USE


V+8V
C1812
YB
1.0/16
Q1806
QSZ2-TRB
IC1801
TND307TD-TBB
VDD
IN A
GND
IN B
VDD
OUT A
OUT B
NC
ADR_D2
ADR_B2
R1822
SS
33
R1823
SS
33
R1816
0
R1817
0
Q1807
QSZ2-TRB
C1811
0.1/100
ACG1098- -T
1SS302-TLB
D1821
GND
R1824
0

* RESISTORS
Indicated in Ω,±5%, 1/16W Tolerance
unless otherwise noted,k:kΩ,M:MΩ.
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF
Indication without voltage is 50V
except electrolytic capacitor.

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

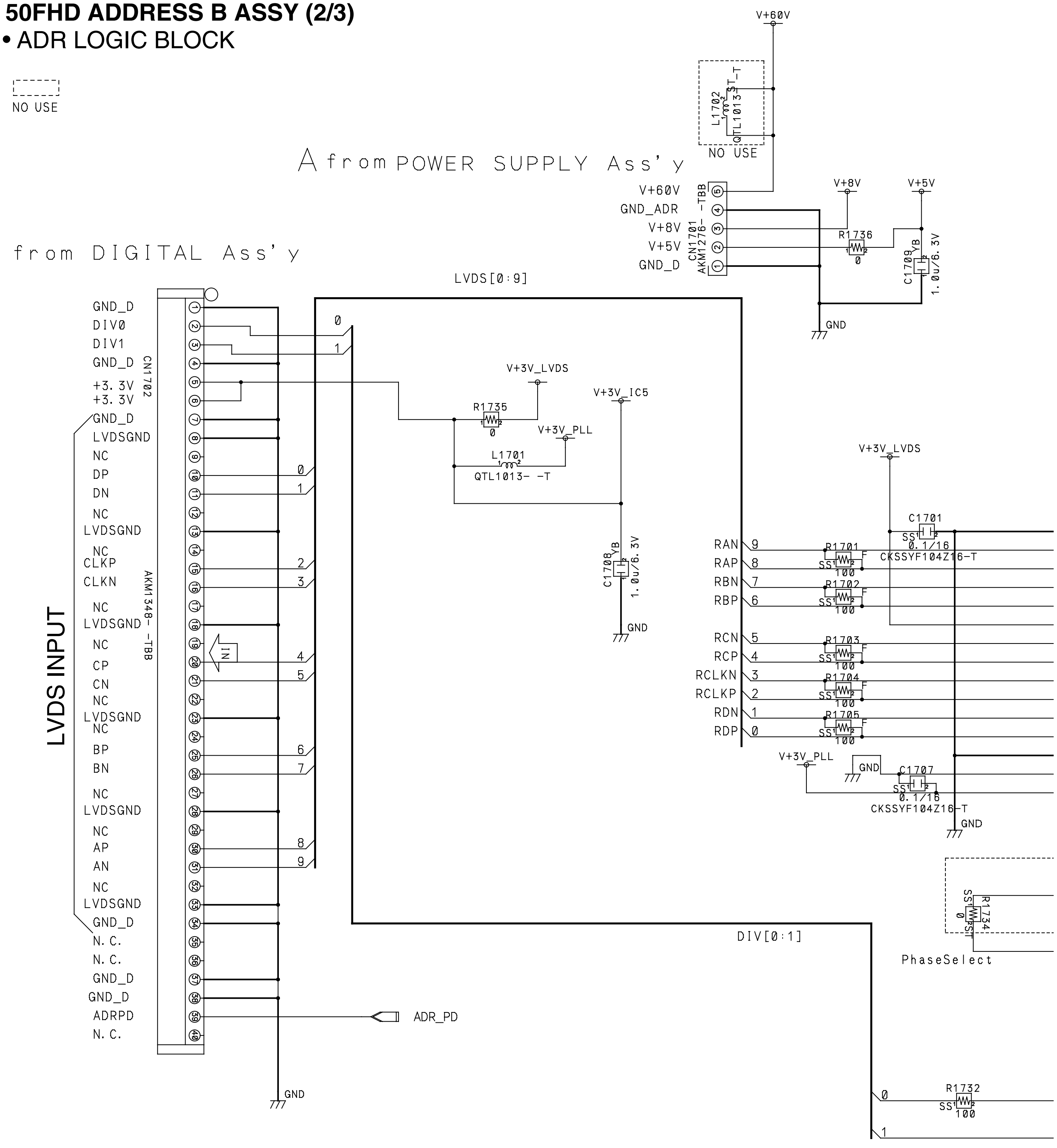
	USED	VACANT
C	1801-1812	
D	1801-1821	
IC	1801-1801	
L	1801-1805	
Q	1801-1810	
R	1801-1824	


V+60V
C1801
1/100
ACG1135-_T
Q1801
HAT3041R-TBB
ADR-D
ADR-B
R1801
22
R1802
22
D1803
UDZS15(B)-TRB
R1803
100K
GND
EP05FA20-TRB_ST
D1801
D1802
EP05FA20-TRB
C1802
0.1/100
ACG1136-_T
L1801
ATH1199-_T
1.5
V+ADR5
D1804
1SS355-TRB
NO USE
Q1802
C1803
R1804
R1805
R1806
D1807
C1804
D1805
D1806
L1802
V+ADR4
D1808
Q1803
C1805
R1807
R1808
R1809
D1811
C1806
D1809
D1810
L1803
V+ADR3
D1812
Q1804
C1807
R1810
R1811
R1812
D1815
C1808
D1813
D1814
L1804
V+ADR2
D1816
Q1805
C1809
R1813
R1814
R1816
D1819
C1810
D1817
D1818
L1805
V+ADR1
D1820
V+8V
R1818
10K
R1819
10K
Q1808
2SA1163(GRBL)-TLB
R1820
2.7K
Q1809
RN1901-T
Q2
Q1810
RN1901-T
Q2
R1821
2.2K
ACT Hi
ADR PD
A
B
C
D
E
F

1.6 50FHD ADDRESS B ASSY (2/3)

50FHD ADDRESS B ASSY (2/3)

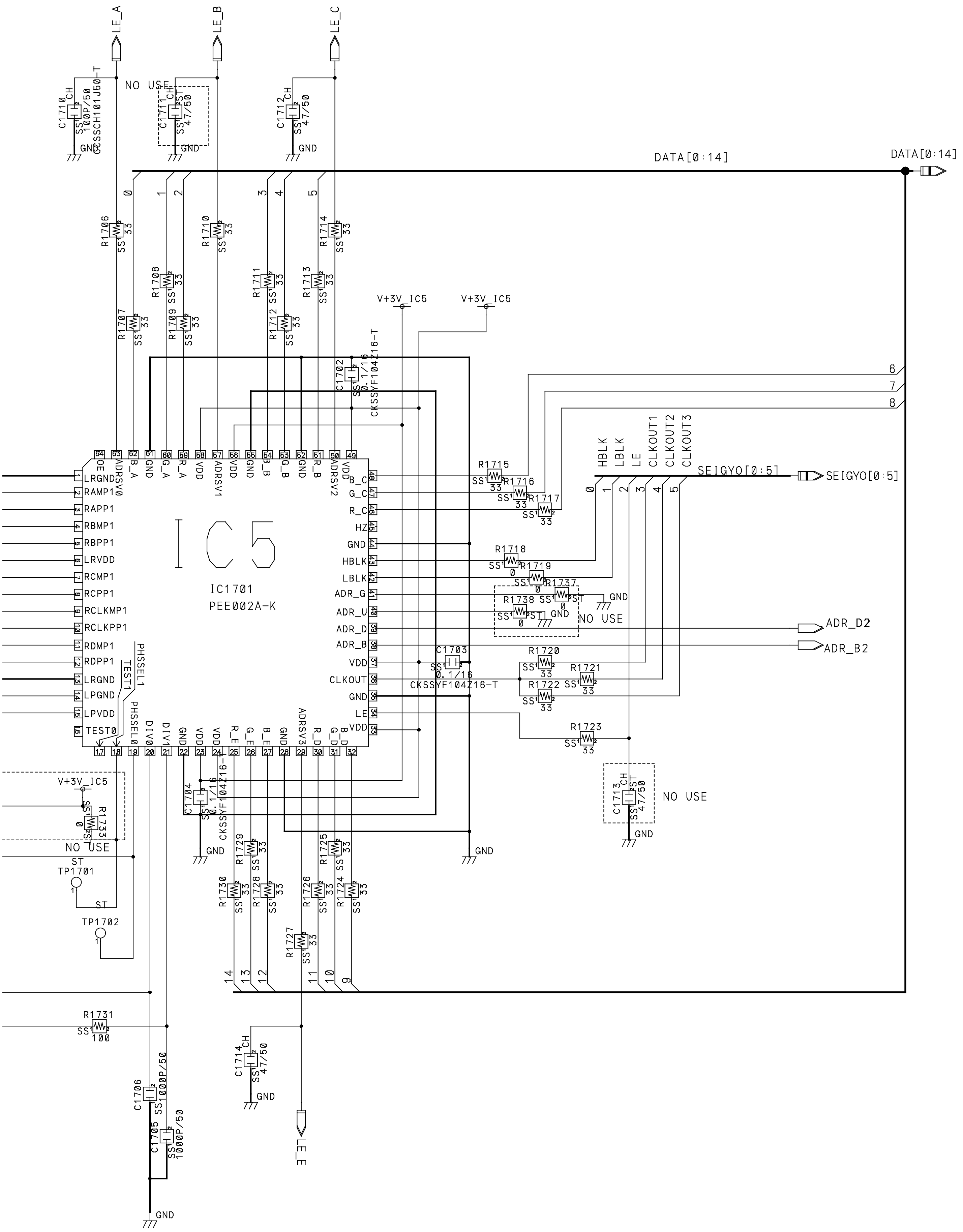
- ADR LOGIC BLOCK


NO USE
A from POWER SUPPLY Ass'y
from DIGITAL Ass'y
V+60V
L1702
QTL1013-ST_T
NO USE
V+60V
GND_ADR
V+8V
V+5V
GND_D
CN1701
AKM1276- -TBB
V+8V
V+5V
R1736
0
C1709
YB
1.0u/6.3V
GND
LVDS[0:9]
LVDS INPUT
GND_D
DIV0
DIV1
GND_D
+3.3V
+3.3V
GND_D
LVDSGND
NC
DP
DN
NC
LVDSGND
NC
CLKP
CLKN
NC
LVDSGND
NC
CP
CN
NC
LVDSGND
NC
BP
BN
NC
LVDSGND
NC
AP
AN
NC
LVDSGND
GND_D
N.C.
N.C.
GND_D
GND_D
ADRPD
N.C.
CN1702
AKM1348- -TBB
IN
V+3V_LVDS
R1735
0
V+3V_IC5
V+3V_PLL
L1701
QTL1013- -T
C1708
YB
1.0u/6.3V
GND
ADR_PD
GND
V+3V_LVDS
C1701
SS
0.1/16
CKSSYF104Z16-T
RAN
RAP
RBN
RBP
RCN
RCP
RCLKN
RCLKP
RDN
RDP
R1701
R1702
R1703
R1704
R1705
SS
F
100
V+3V_PLL
GND
C1707
SS
0.1/16
CKSSYF104Z16-T
GND
R1734
SS
0
PhaseSelect
DIV[0:1]
R1732
SS
100

* RESISTORS
Indicated in Ω,±5%, 1/16W Tolerance
unless otherwise noted,k:kΩ,M:MΩ.
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF
Indication without voltage is 50V
except electrolytic capacitor.

	USED	VACANT
C	1701-1709	
CN	1701-1702	
IC	1701-1701	
L	1701-1702	
R	1701-1738	
TP	1701-1702	

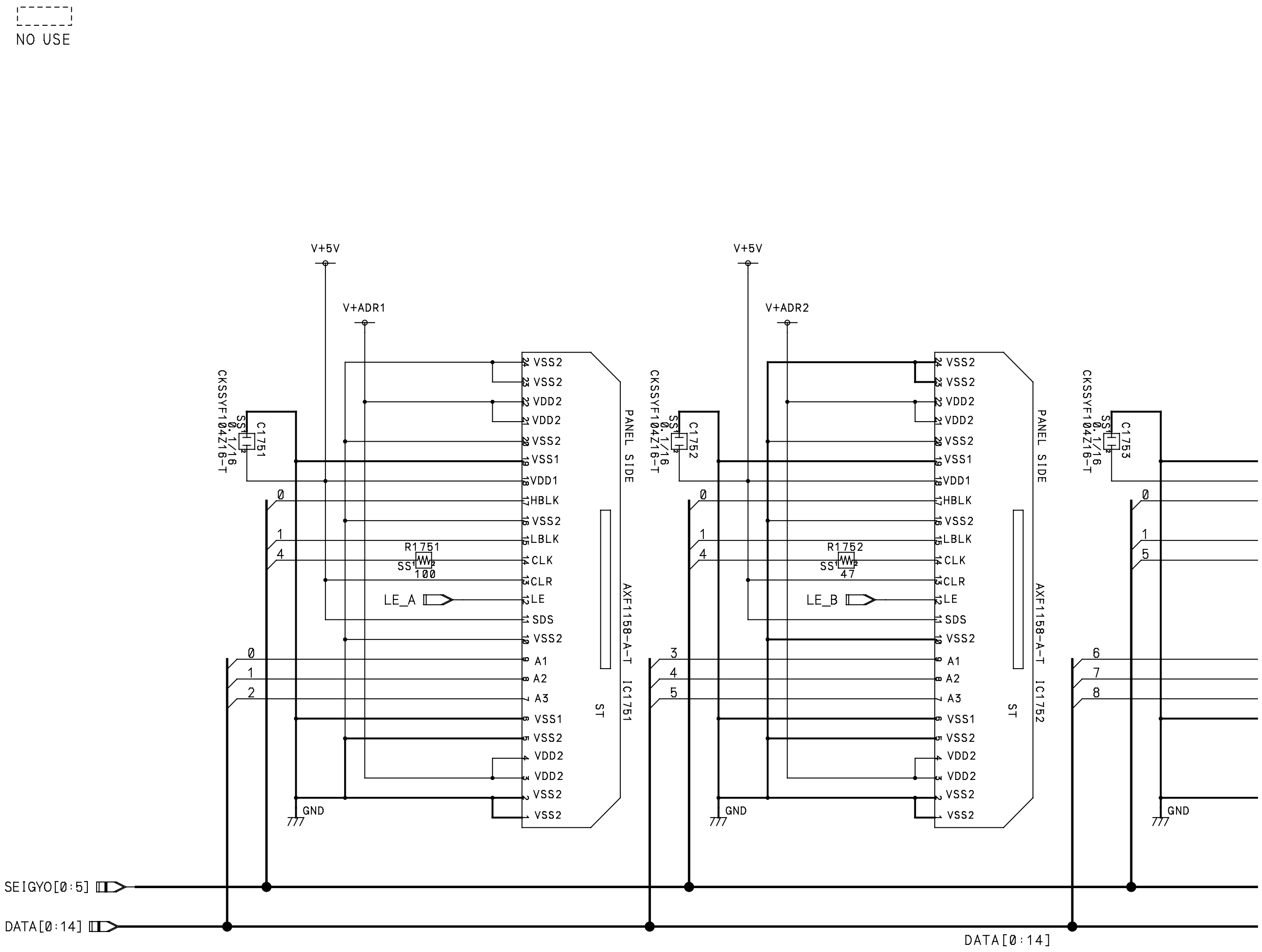
The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.


LE_A
LE_B
LE_C
NO USE
C1710 CH SS 100P/50 CCSSCH101J50-T
C1711 CH ST SS 47/50
C1712 CH SS 47/50
GND
DATA[0:14]
0
1
2
3
4
5
R1706 SS 33
R1707 SS 33
R1708 SS 33
R1709 SS 33
R1710 SS 33
R1711 SS 33
R1712 SS 33
R1713 SS 33
R1714 SS 33
V+3V_IC5
C1702 SS 0.1/16 CKSSYF104Z16-T
6
7
8
OE ADRSV0 B_A GND G_A R_A VDD ADRSV1 VDD GND B_B G_B GND R_B ADRSV2 VDD
1 LRGND
2 RAMP1
3 RAPP1
4 RBMP1
5 RBPP1
6 LRVDD
7 RCMP1
8 RCPP1
9 RCLKMP1
10 RCLKPP1
11 RDMP1
12 RDPP1
13 LRGND
14 LPGND
15 LPVDD
16 TEST0
IC5
IC1701
PEE002A-K
48 B_C
47 G_C
46 R_C
45 HZ
44 GND
43 HBLK
42 LBLK
41 ADR_G
40 ADR_U
39 ADR_D
38 ADR_B
37 VDD
36 CLKOUT
35 GND
34 LE
33 VDD
PHSSEL1 TEST1 PHSSEL0 DIV0 DIV1 GND VDD VDD R_E G_E B_E GND ADRSV3 R_D G_D B_D
HBLK LBLK LE CLKOUT1 CLKOUT2 CLKOUT3
SEIGYO[0:5]
R1715 SS 33
R1716 SS 33
R1717 SS 33
R1718 SS 0
R1719 SS 0
R1737 SS ST 0
R1738 SS ST 0
NO USE
ADR_D2
ADR_B2
C1703 SS 0.1/16 CKSSYF104Z16-T
R1720 SS 33
R1721 SS 33
R1722 SS 33
R1723 SS 33
C1713 CH ST SS 47/50
NO USE
C1704 SS 0.1/16 CKSSYF104Z16-T
R1733 SS 0
TP1701 ST
TP1702
R1724 SS 33
R1725 SS 33
R1726 SS 33
R1727 SS 33
R1728 SS 33
R1729 SS 33
R1730 SS 33
14 13 12 11 10 9
R1731 SS 100
C1714 CH SS 47/50
C1706 SS 1000P/50
C1705 SS 1000P/50
LE_E

1.7 50FHD ADDRESS B ASSY (3/3)

50FHD ADDRESS B ASSY (3/3)

• ADR CONNECT BLOCK

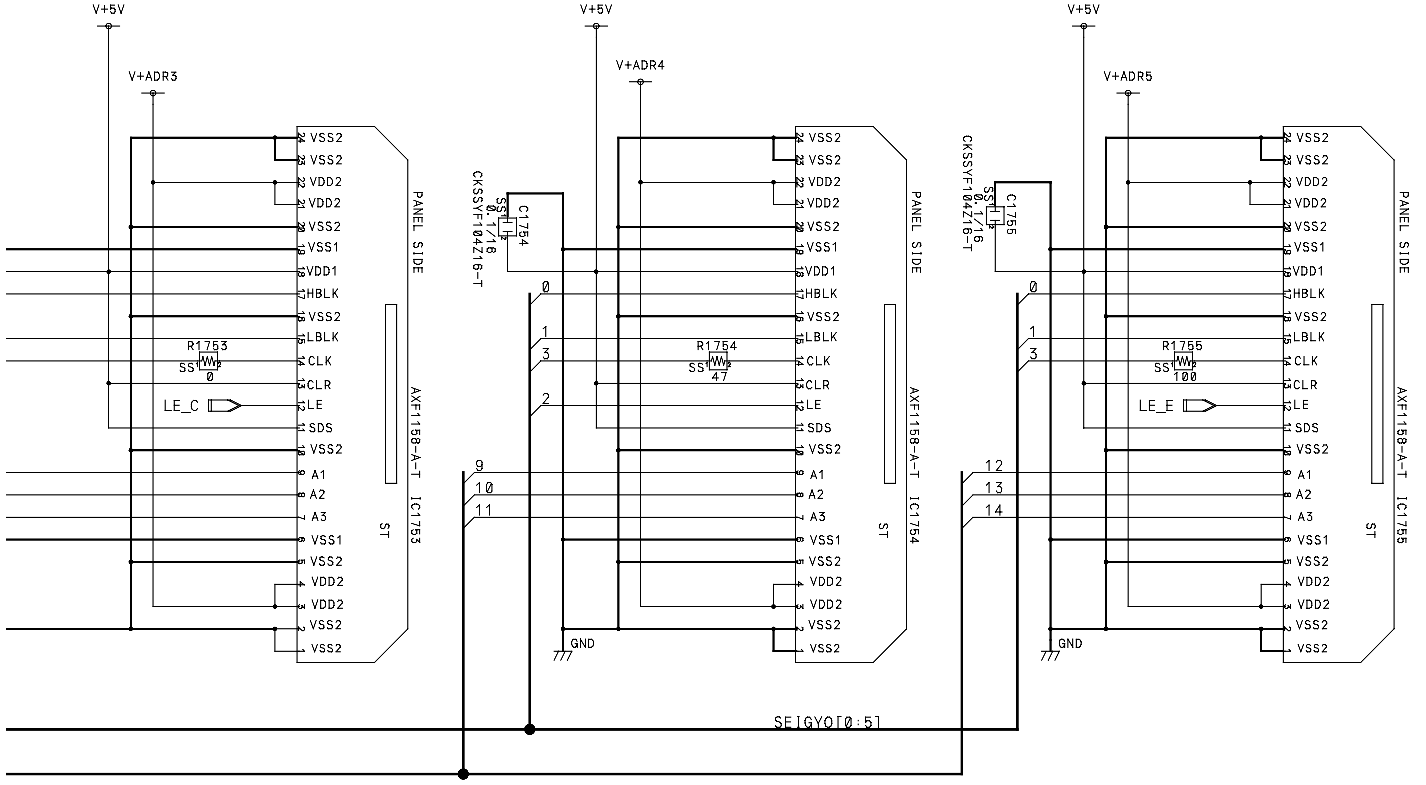

NO USE
V+5V
V+ADR1
V+ADR2
CKSSYF104Z16-T
SS
C1751
C1752
C1753
0.1/16
R1751
100
R1752
47
LE_A
LE_B
24 VSS2
23 VSS2
22 VDD2
21 VDD2
20 VSS2
19 VSS1
18 VDD1
17 HBLK
16 VSS2
15 LBLK
14 CLK
13 CLR
12 LE
11 SDS
10 VSS2
9 A1
8 A2
7 A3
6 VSS1
5 VSS2
4 VDD2
3 VDD2
2 VSS2
1 VSS2
PANEL SIDE
AXF1158-A-T
IC1751
IC1752
ST
GND
0
1
4
5
2
3
6
7
8
SEIGYO[0:5]
DATA[0:14]

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance unless otherwise noted, k:kΩ, M:MΩ.

* CAPACITORS
Indicated in Capacity(μF)/Voltage(V) unless otherwise noted. p:pF
Indication without voltage is 50V except electrolytic capacitor.

	USED	VACANT
C	1751-1755	
IC	1751-1755	
R	1751-1755	

The ⚠ mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.


V+5V
V+ADR3
V+5V
V+ADR4
V+5V
V+ADR5
VSS2
VSS2
VDD2
VDD2
VSS2
VSS1
VDD1
HBLK
VSS2
LBLK
CLK
CLR
LE
SDS
VSS2
A1
A2
A3
VSS1
VSS2
VDD2
VDD2
VSS2
VSS2
PANEL SIDE
AXF1158-A-T IC1753
ST
R1753
SS
0
LE_C
C1754
SS
0.1/16
CKSSYF104Z16-T
0
1
3
2
9
10
11
R1754
SS
47
GND
AXF1158-A-T IC1754
C1755
SS
0.1/16
CKSSYF104Z16-T
12
13
14
R1755
SS
100
LE_E
AXF1158-A-T IC1755
SE[GYO[0:5]

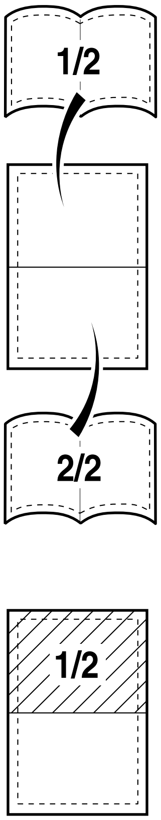
1.8 50FHD SCAN A ASSY

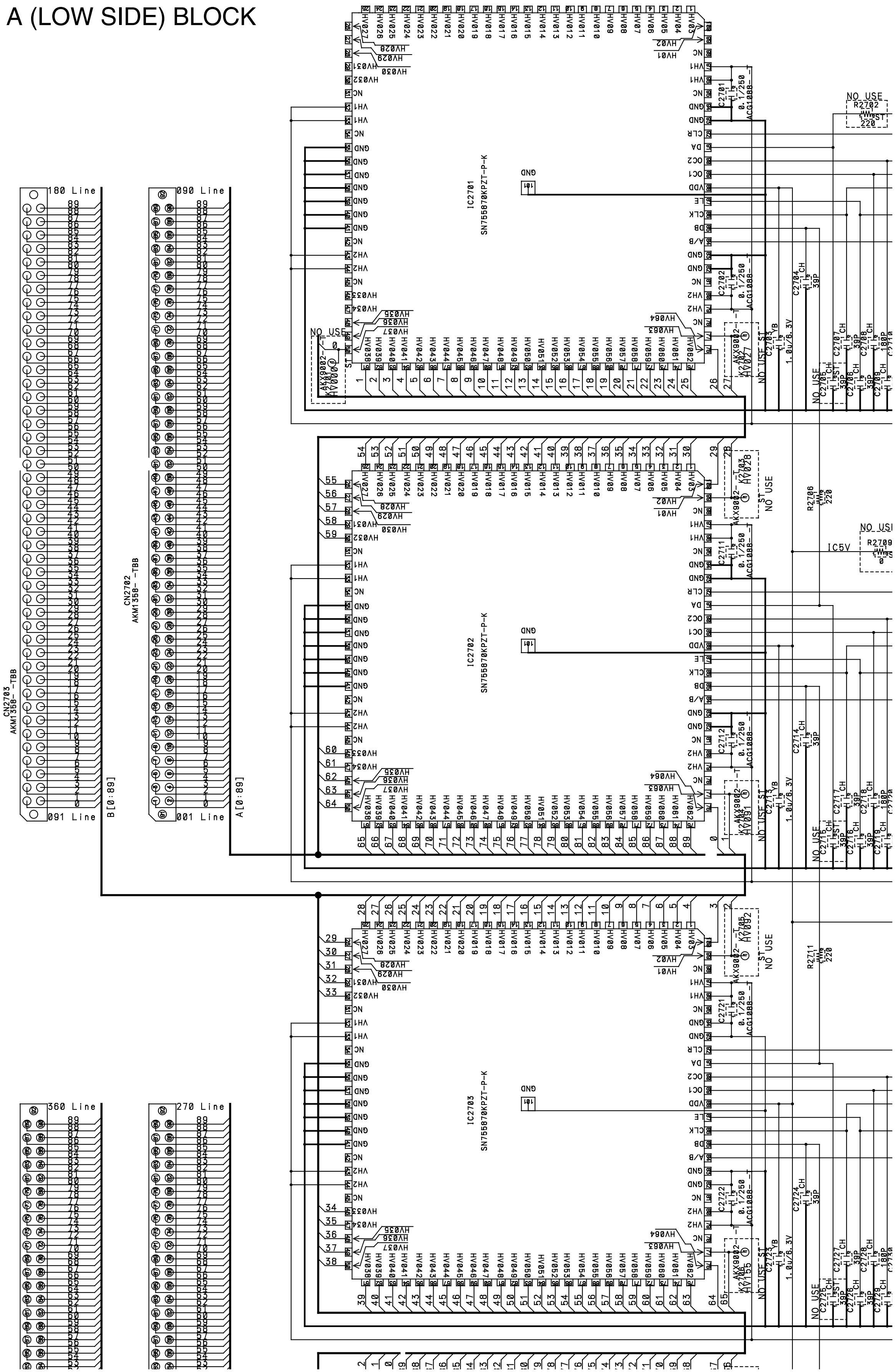
50 FHD SCAN A ASSY

- 50 FHD SCAN A (LOW SIDE) BLOCK

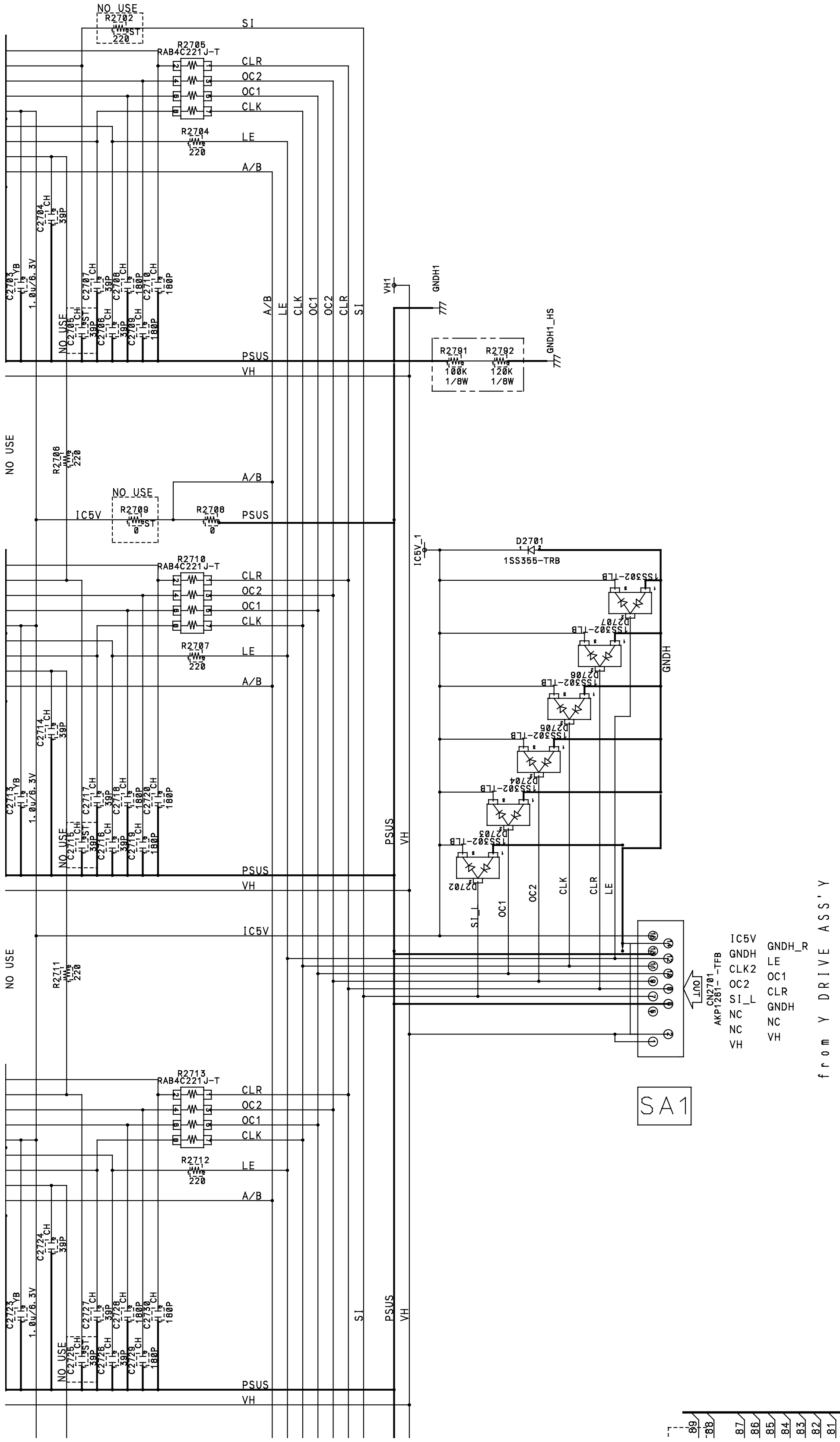
NO USE

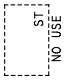
Large size SCH diagram





IC2701
SN755870KPZT-P-K
IC2702
SN755870KPZT-P-K
IC2703
SN755870KPZT-P-K
CN2703
AKM1358-TBB
CN2702
AKM1358-TBB
180 Line
090 Line
091 Line
001 Line
360 Line
270 Line
B[0:89]
A[0:89]
GND
VH1
VH2
NC
CLR
DA
OC2
OC1
VDD
LE
CLK
DB
A/B
HV01
HV064
C2701
0.1/250
ACG1088
C2702
C2704
CH
39P
C2711
C2712
C2714
C2721
C2722
C2724
R2702
220
NO USE
R2706
220
R2709
IC5V
R2711
220
AKX9002
K2701
K2702
K2703
K2704
K2705
K2706
HV001
HV027
HV028
HV091
HV092
HV135
ST
1.0u/6.3V


NO USE
R2702
ST
220
SI
R2705
RAB4C221J-T
CLR
OC2
OC1
CLK
R2704
220
LE
A/B
C2704
CH
39P
C2703
B
1.0u/6.3V
C2707
C2705
C2706
C2708
C2709
C2710
180P
NO USE
A/B
LE
CLK
OC1
OC2
CLR
SI
VH1
GNDH1
GNDH1_HS
PSUS
VH
R2791
100K
1/8W
R2792
120K
1/8W
NO USE
R2706
220
A/B
NO USE
R2709
0
R2708
0
IC5V
PSUS
IC5V_1
D2701
1SS355-TRB
R2710
RAB4C221J-T
R2707
C2714
C2713
C2717
C2715
C2716
C2718
C2719
C2720
1SS302-TLB
D2702
D2703
D2704
D2705
D2706
D2707
GNDH
SI_L
OC1
OC2
CLK
CLR
LE
IC5V
NO USE
R2711
220
CN2701
AKP1261- -TFB
IN1
IC5V
GNDH
CLK2
OC2
SI_L
NC
NC
VH
GNDH_R
LE
OC1
CLR
GNDH
NC
VH
from Y DRIVE ASS'Y
SA1
R2713
RAB4C221J-T
R2712
C2724
C2723
C2727
C2725
C2726
C2728
C2729
C2730



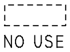
USED	VACANT
C 2701-2790 CN 2701-2707 D 2701-2707 IC 2701-2709 K 2701-2718 R 2702-2732, 2791,92	2703, 2733-2790

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k: kΩ, M: MΩ.
* CAPACITORS
Indicated in Capacity (µF)/Voltage (V)
unless otherwise noted, p: pF.
Indication without voltage is 50V
except electrolytic capacitor.

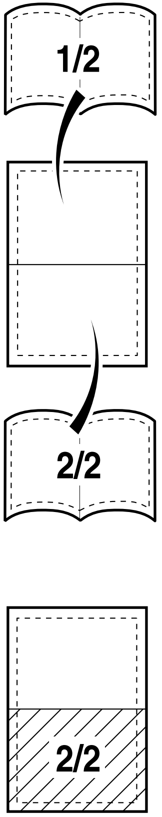
The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

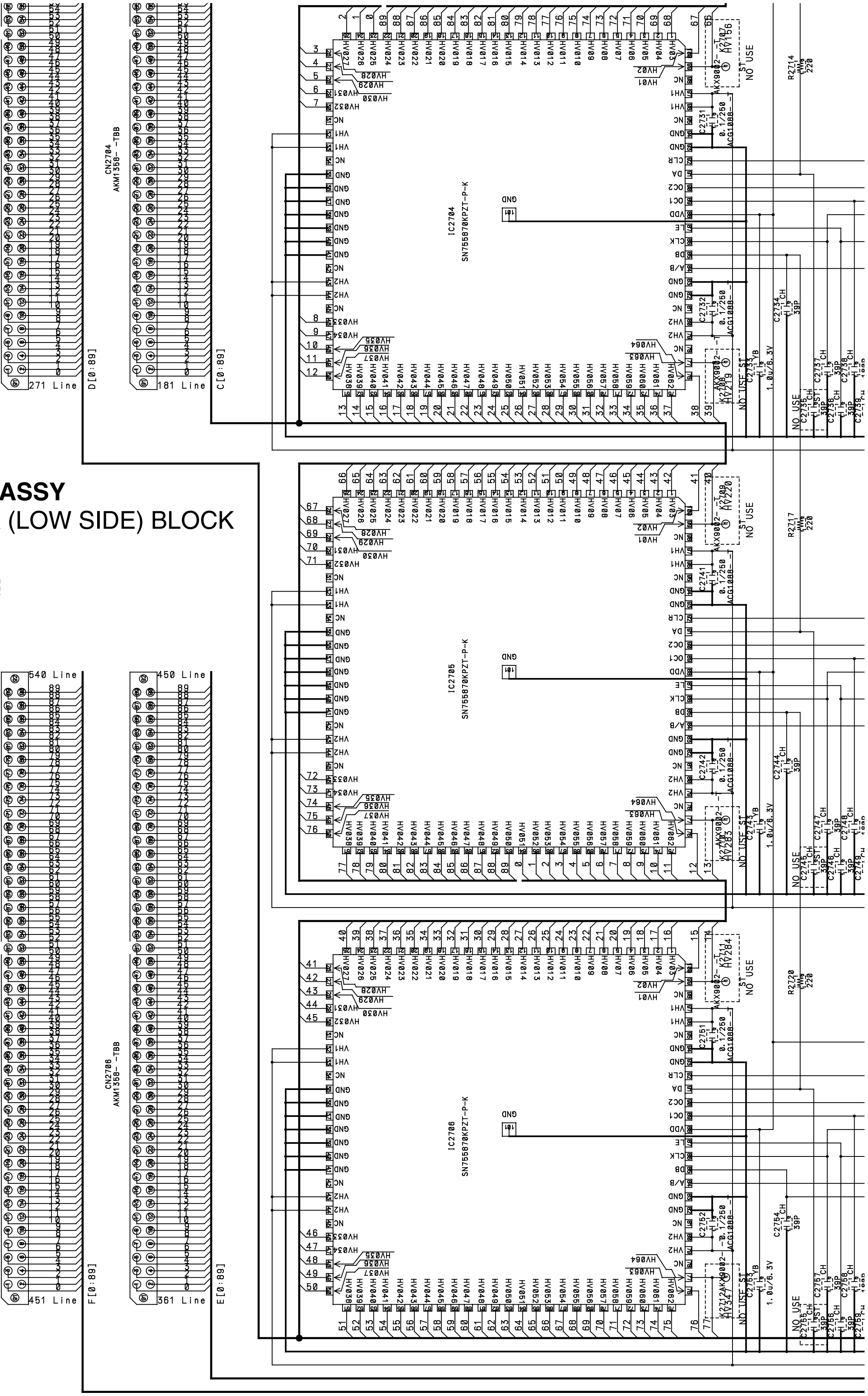
50 FHD SCAN A ASSY

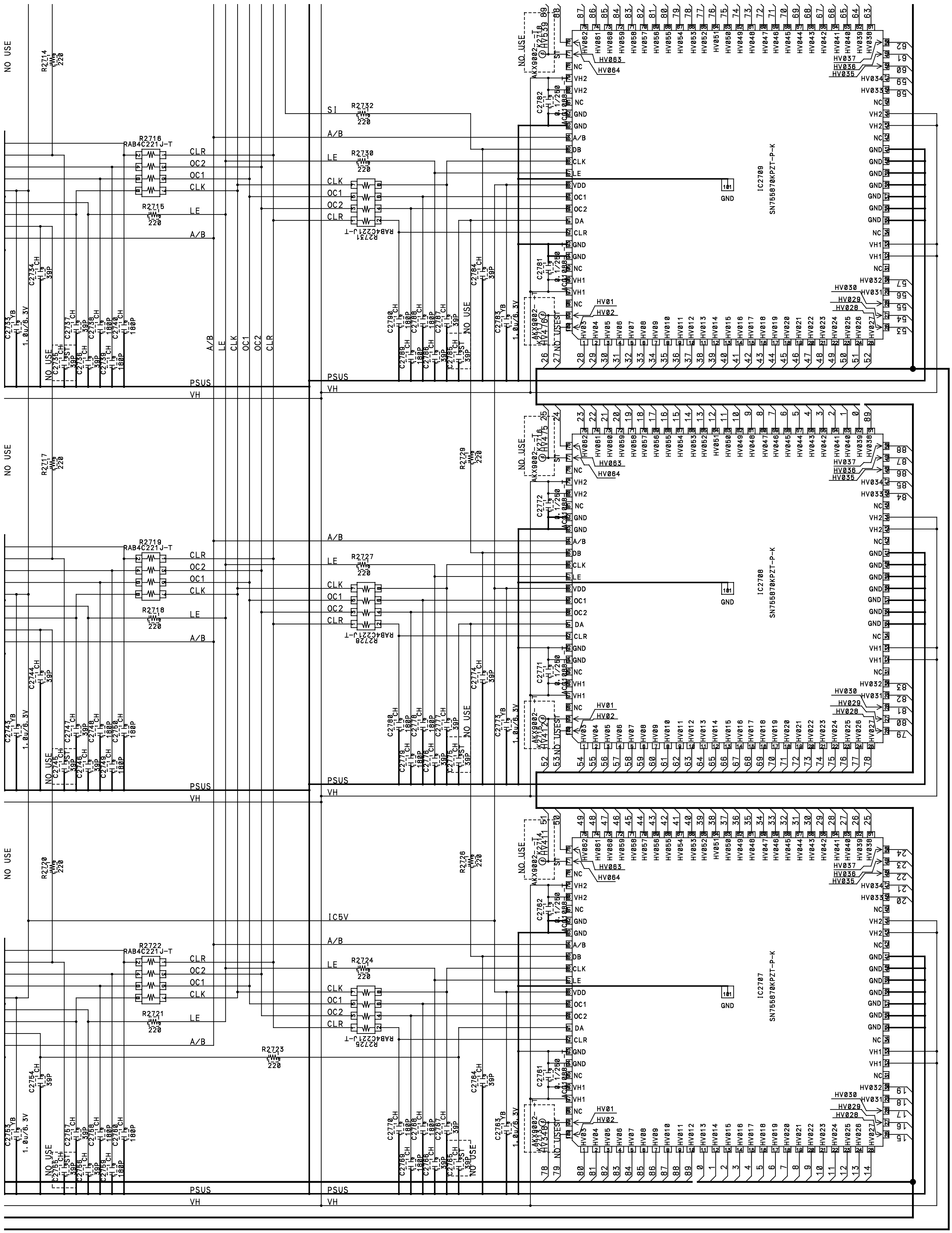
- 50 FHD SCAN A (LOW SIDE) BLOCK



Large size SCH diagram




CN2705
AKM1358- -TBB
271 Line
D[0:89]
CN2704
AKM1358- -TBB
181 Line
C[0:89]
540 Line
450 Line
CN2707
AKM1358- -TBB
451 Line
F[0:89]
CN2706
AKM1358- -TBB
361 Line
E[0:89]
IC2704
SN755870KPZT-P-K
IC2705
SN755870KPZT-P-K
IC2706
SN755870KPZT-P-K
GND
VH1
VH2
NC
CLR
DA
OC2
OC1
VDD
LE
CLK
DB
A/B
C2731
C2732
C2734
C2741
C2742
C2744
C2751
C2752
C2754
0.1/250
ACG1088-
39P
1.0u/6.3V
NO USE
R2714
R2717
R2720
220
AKX9002-
HV156
HV220
HV204
HV219
HV283
HV347


A
B
C
D
E
F
NO USE
R2714 220
R2717 220
R2720 220
RAB4C221J-T
R2716
R2719
R2722
R2715 220
R2718 220
R2721 220
R2723 220
R2732 220
R2730 220
R2727 220
R2724 220
R2731 RAB4C221J-T
R2728 RAB4C221J-T
R2725 RAB4C221J-T
R2729 220
R2726 220
SI
A/B
LE
CLK
OC1
OC2
CLR
DA
DB
VDD
GND
NC
VH1
VH2
PSUS
VH
IC5V
C2733 1.0u/6.3V
C2734 39P
C2735 39P
C2736 39P
C2737 39P
C2738 39P
C2739 180P
C2740 180P
C2741 180P
C2743 1.0u/6.3V
C2744 39P
C2745 39P
C2746 39P
C2747 39P
C2748 39P
C2749 180P
C2750 180P
C2753 1.0u/6.3V
C2754 39P
C2755 39P
C2756 39P
C2757 39P
C2758 39P
C2759 180P
C2760 180P
C2781 0.1/250
C2782 0.1/250
C2783 1.0u/6.3V
C2784 39P
C2785 39P
C2786 39P
C2787 39P
C2788 180P
C2789 180P
C2790 180P
C2771 0.1/250
C2772 0.1/250
C2773 1.0u/6.3V
C2774 39P
C2775 39P
C2776 39P
C2777 39P
C2778 180P
C2779 180P
C2780 180P
C2761 0.1/250
C2762 0.1/250
C2763 1.0u/6.3V
C2764 39P
C2765 39P
C2766 39P
C2767 39P
C2768 180P
C2769 180P
C2770 180P
AKX9002-T
KV2718
KV2716
KV2714
KV2715
KV2712
KV2713
IC2709 SN755870KPZT-P-K
IC2708 SN755870KPZT-P-K
IC2707 SN755870KPZT-P-K
HV01
HV02
HV03
HV04
HV05
HV06
HV07
HV08
HV09
HV010
HV011
HV012
HV013
HV014
HV015
HV016
HV017
HV018
HV019
HV020
HV021
HV022
HV023
HV024
HV025
HV026
HV027
HV028
HV029
HV030
HV031
HV032
HV033
HV034
HV035
HV036
HV037
HV038
HV039
HV040
HV041
HV042
HV043
HV044
HV045
HV046
HV047
HV048
HV049
HV050
HV051
HV052
HV053
HV054
HV055
HV056
HV057
HV058
HV059
HV060
HV061
HV062
HV063
HV064
ST

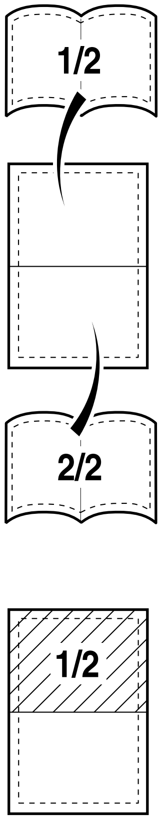
1.9 50FHD SCAN B ASSY

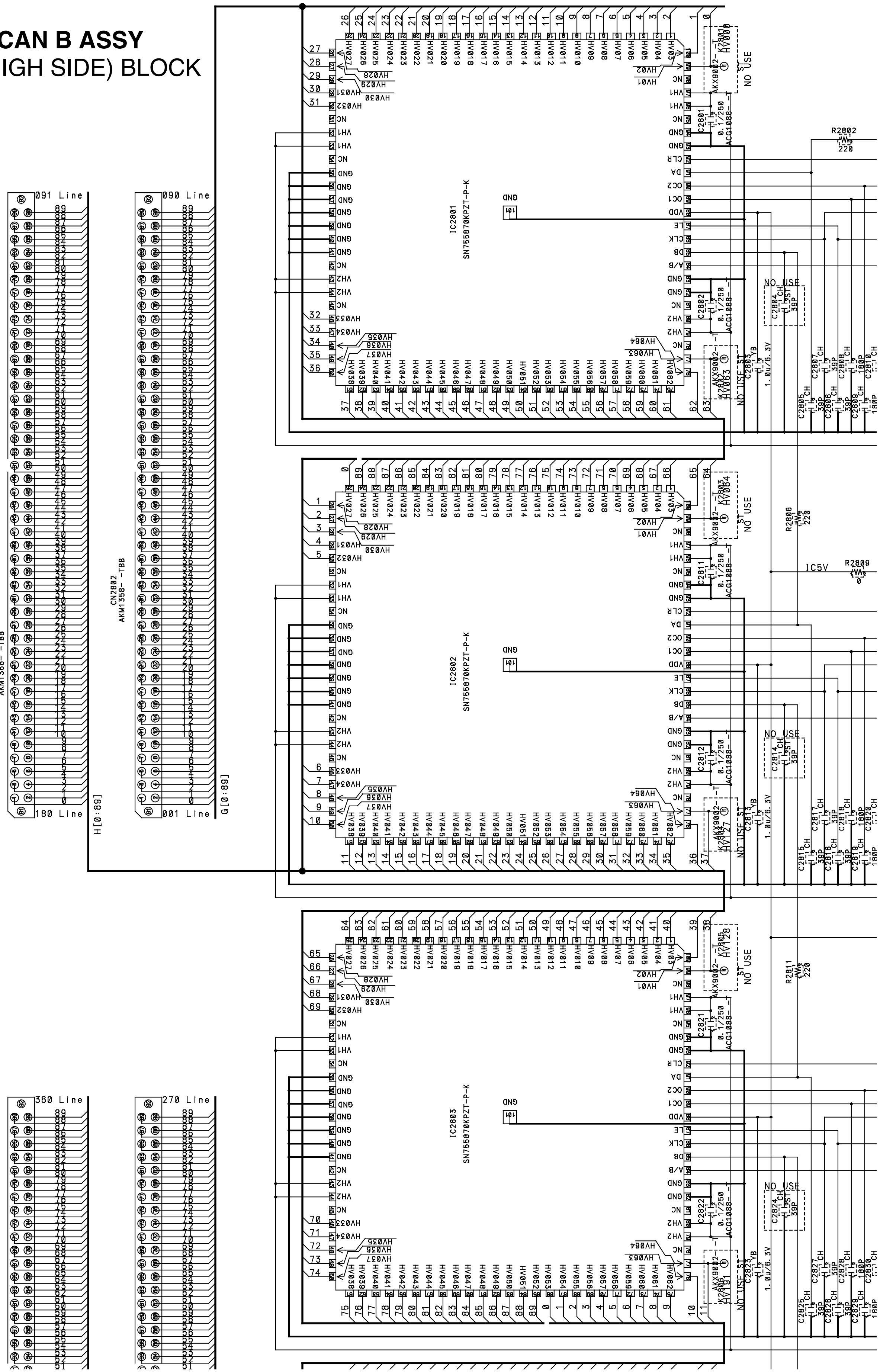
50 FHD FHD SCAN B ASSY

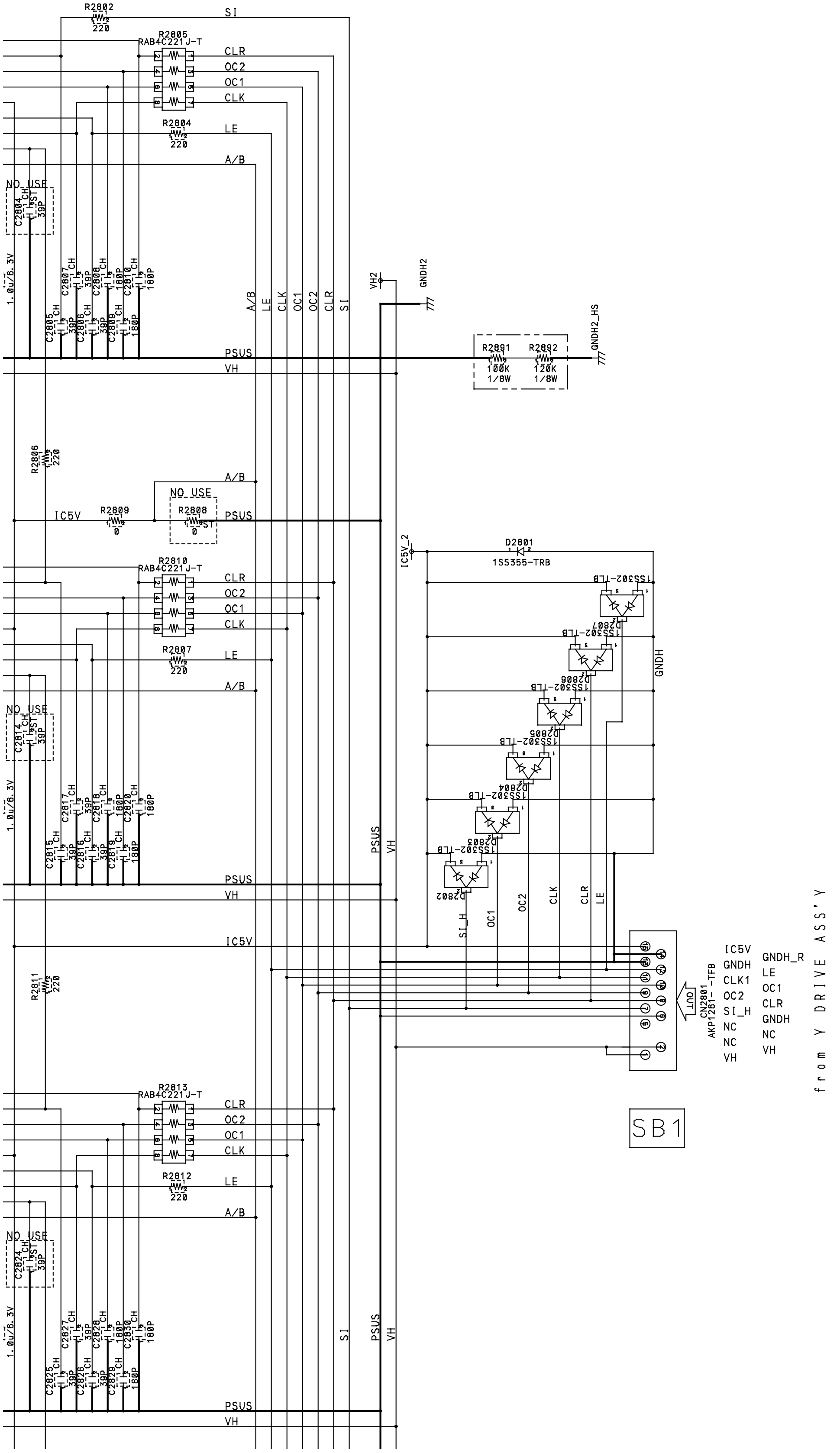
- 50 SCAN B (HIGH SIDE) BLOCK

NO USE

Large size SCH diagram




IC2801
SN755870KPZT-P-K
IC2802
SN755870KPZT-P-K
IC2803
SN755870KPZT-P-K
CN2802
AKM1358- -TBB
CN2803
AKM1358- -TBB
091 Line
180 Line
090 Line
001 Line
360 Line
270 Line
H[0:89]
G[0:89]
GND
VH1
VH2
VDD
CLR
DA
OC1
OC2
LE
CLK
DB
A/B
NC
C2801
C2802
0.1/250
ACG1088-
C2803
1.0u/6.3V
C2804
NO USE
C2805
C2806
C2807
C2808
C2809
C2810
39P
180P
R2802
220
R2806
220
R2809
0
R2811
220
IC5V
C2811
C2812
C2813
C2814
C2815
C2816
C2817
C2818
C2819
C2820
C2821
C2822
C2823
C2824
C2825
C2826
C2827
C2828
C2829
C2830
K2801
K2802
K2803
K2804
K2805
K2806
AKX9002-T
NO USE ST
HV000
HV063
HV064
HV127
HV128
HV191


R2802
220
SI
R2805
RAB4C221J-T
CLR
OC2
OC1
CLK
R2804
220
LE
A/B
NO USE
C2804
CH
ST
39P
1.0u/6.3V
C2805
C2806
C2807
C2808
C2809
C2810
39P
180P
CH
A/B
LE
CLK
OC1
OC2
CLR
SI
VH2
GNDH2
PSUS
VH
R2891
100K
1/8W
R2892
120K
1/8W
GNDH2_HS
R2806
220
A/B
NO USE
R2808
0
ST
IC5V
R2809
0
PSUS
IC5V_2
D2801
1SS355-TRB
R2810
RAB4C221J-T
CLR
OC2
OC1
CLK
R2807
220
LE
A/B
1SS302-TLB
D2802
D2803
D2804
D2805
D2806
D2807
GNDH
NO USE
C2814
CH
ST
39P
1.0u/6.3V
C2815
C2816
C2817
C2818
C2819
C2820
39P
180P
CH
PSUS
VH
SI_H
OC1
OC2
CLK
CLR
LE
IC5V
R2811
220
CN2801
AKP1261-TFB
OUT
IC5V
GNDH
CLK1
OC2
SI_H
NC
NC
VH
GNDH_R
LE
OC1
CLR
GNDH
NC
VH
from Y DRIVE ASS'Y
SB1
R2813
RAB4C221J-T
CLR
OC2
OC1
CLK
R2812
220
LE
A/B
NO USE
C2824
CH
ST
39P
1.0u/6.3V
C2825
C2826
C2827
C2828
C2829
C2830
39P
180P
CH
SI
PSUS
VH
PSUS
VH
ST
NO USE

A

B

C

D

E

F

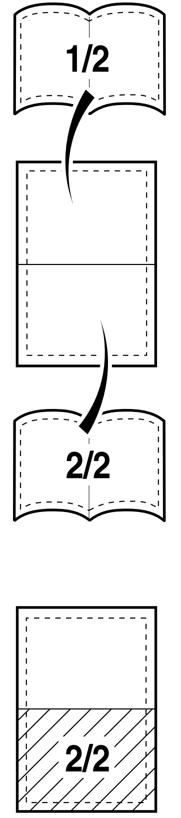
USED	VACANT
C 2801-2890	
CN 2801-2807	
D 2801-2807	
IC 2801-2809	
K 2801-2818	
R 2802-2832, 2891,2892	2803, 2833-2890

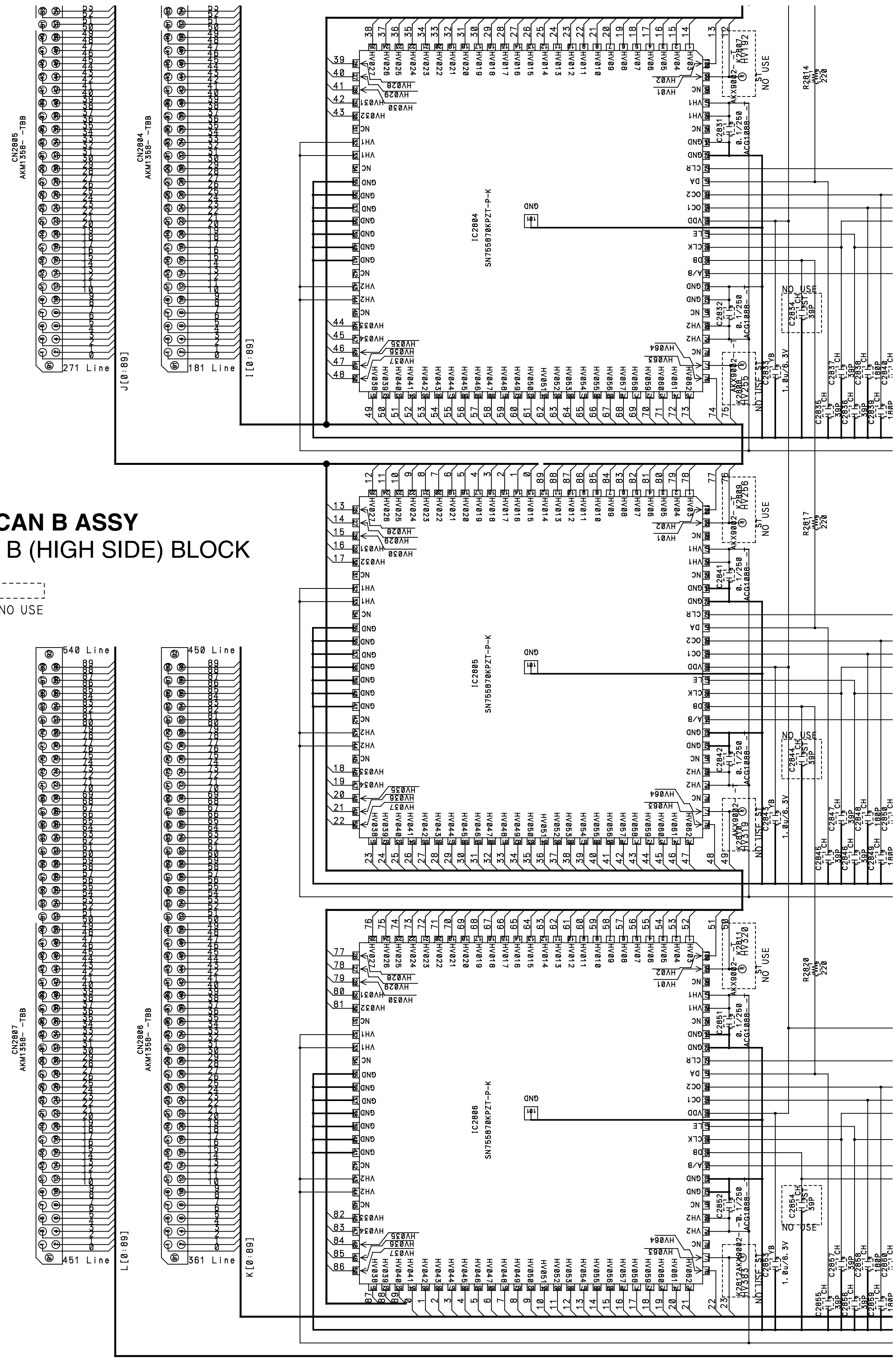
50 FHD SCAN B ASSY

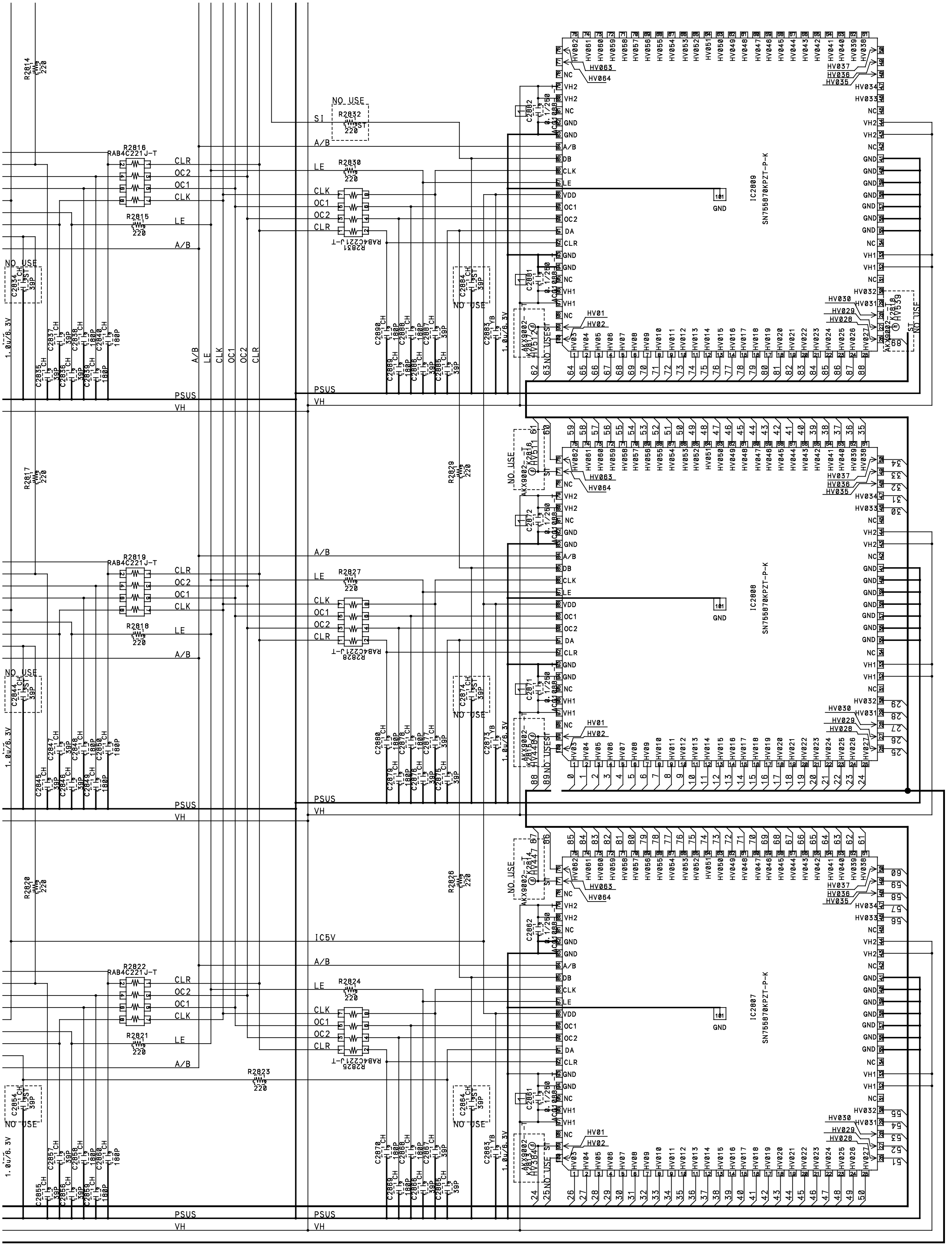
• 50 SCAN B (HIGH SIDE) BLOCK

NO USE

Large size SCH diagram



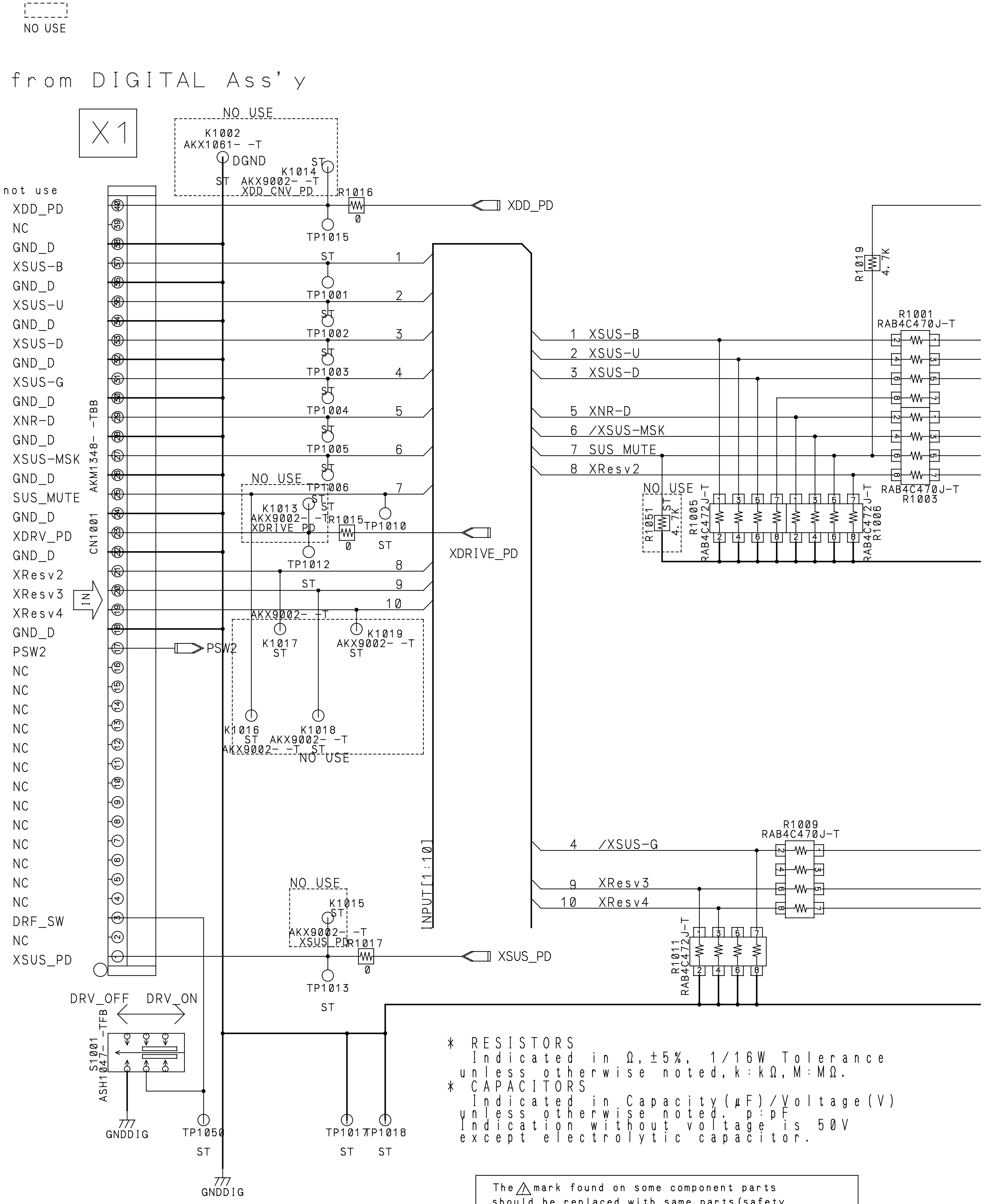

CN2805
AKM1358- -TBB
271 Line
J[0:89]
CN2804
AKM1358- -TBB
181 Line
I[0:89]
CN2807
AKM1358- -TBB
540 Line
451 Line
L[0:89]
CN2806
AKM1358- -TBB
450 Line
361 Line
K[0:89]
IC2804
SN755870KPZT-P-K
IC2805
SN755870KPZT-P-K
IC2806
SN755870KPZT-P-K
GND
VH1
VH2
NC
CLR
DA
OC2
OC1
VDD
LE
CLK
DB
A/B
K2807 AKX9002-T ST NO USE HV192
K2808 AKX9002-T ST NO USE HV255
K2809 AKX9002-T ST NO USE HV256
K2810 AKX9002-T ST NO USE HV319
K2811 AKX9002-T ST NO USE HV320
K2812 AKX9002-T ST NO USE HV383
C2831 0.1/250 ACG1088
C2832 0.1/250 ACG1088
C2841 0.1/250 ACG1088
C2842 0.1/250 ACG1088
C2851 0.1/250 ACG1088
C2852 0.1/250 ACG1088
C2833 1.0u/6.3V
C2843 1.0u/6.3V
C2853 1.0u/6.3V
C2834 CH 39P NO USE
C2844 CH 39P NO USE
C2854 CH 39P NO USE
R2814 1/16W 220
R2817 1/16W 220
R2820 1/16W 220
C2835 CH 39P
C2836 CH 39P
C2837 CH 39P
C2838 CH 39P
C2839 CH 180P
C2840 CH 180P
C2845 CH 39P
C2846 CH 39P
C2847 CH 39P
C2848 CH 39P
C2849 CH 180P
C2850 CH 180P
C2855 CH 39P
C2856 CH 39P
C2857 CH 39P
C2858 CH 39P
C2859 CH 180P
C2860 CH 180P


A
B
C
D
E
F
R2814 220
R2816 RAB4C221J-T
R2815 220
R2817 220
R2819 RAB4C221J-T
R2818 220
R2820 220
R2822 RAB4C221J-T
R2821 220
R2823 220
R2832 NO USE 220
R2830 220
R2831 RAB4C221J-T
R2827 220
R2828 RAB4C221J-T
R2824 220
R2825 RAB4C221J-T
R2829 220
R2826 220
C2834 NO USE 39P
C2844 NO USE 39P
C2854 NO USE 39P
C2884 NO USE 39P
C2874 NO USE 39P
C2864 NO USE 39P
C2835 C2836 C2837 C2838 C2839 C2840 39P 180P
C2845 C2846 C2847 C2848 C2849 C2850 39P 180P
C2855 C2856 C2857 C2858 C2859 C2860 39P 180P
C2885 C2875 C2865 1.0u/6.3V
C2882 C2881 C2872 C2871 C2862 C2861 0.1/250
ACG1088
AKX9002- NO USE
K2818 HV539
K2817 HV512
K2816 HV511
K2815 HV448
K2814 HV447
K2813 HV384
SI
A/B
LE
CLK
OC1
OC2
CLR
PSUS
VH
IC5V
DB
DA
VDD
GND
NC
VH1
VH2
HV01 … HV064
IC2809 SN755870KPZT-P-K
IC2808 SN755870KPZT-P-K
IC2807 SN755870KPZT-P-K

1.10 50FHD X DRIVE ASSY (1/4)

50FHD X DRIVE ASSY (1/4)

- X LOGIC BLOCK

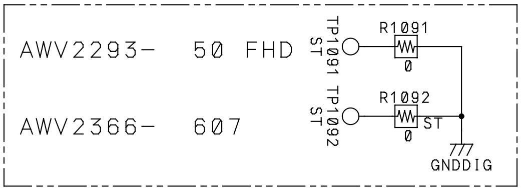

NO USE
from DIGITAL Ass'y
X1
not use
XDD_PD
NC
GND_D
XSUS-B
GND_D
XSUS-U
GND_D
XSUS-D
GND_D
XSUS-G
GND_D
XNR-D
GND_D
XSUS-MSK
GND_D
SUS_MUTE
GND_D
XDRV_PD
GND_D
XResv2
XResv3
XResv4
GND_D
PSW2
NC
NC
NC
NC
NC
NC
NC
NC
NC
NC
NC
NC
NC
DRF_SW
NC
XSUS_PD
IN
CN1001
AKM1348- -TBB
NO USE
K1002
AKX1061- -T
DGND
ST
K1014
ST AKX9002- -T
XDD_CNV_PD
R1016
0
XDD_PD
TP1015
TP1001
TP1002
TP1003
TP1004
TP1005
TP1006
ST
1
2
3
4
5
6
7
8
9
10
NO USE
K1013
AKX9002- -T
XDRIVE_PD
R1015
0
TP1010
TP1012
XDRIVE_PD
PSW2
AKX9002- -T
K1017
K1019
AKX9002- -T
K1016
AKX9002- -T
K1018
AKX9002- -T
NO USE
INPUT[1:10]
NO USE
K1015
AKX9002- -T
XSUS_PD
R1017
0
TP1013
XSUS_PD
DRV_OFF
DRV_ON
S1001
ASH1047- -TFB
GNDDIG
TP1050
TP1017
TP1018
GNDDIG
1 XSUS-B
2 XSUS-U
3 XSUS-D
5 XNR-D
6 /XSUS-MSK
7 SUS MUTE
8 XResv2
R1019
4.7K
R1001
RAB4C470J-T
RAB4C470J-T
R1003
NO USE
R1051
4.7K
R1005
RAB4C472J-T
RAB4C472J-T
R1006
4 /XSUS-G
9 XResv3
10 XResv4
R1009
RAB4C470J-T
R1011
RAB4C472J-T

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k: kΩ, M: MΩ.
* CAPACITORS
Indicated in Capacity (μF) / Voltage (V)
unless otherwise noted. p: pF
Indication without voltage is 50V
except electrolytic capacitor.

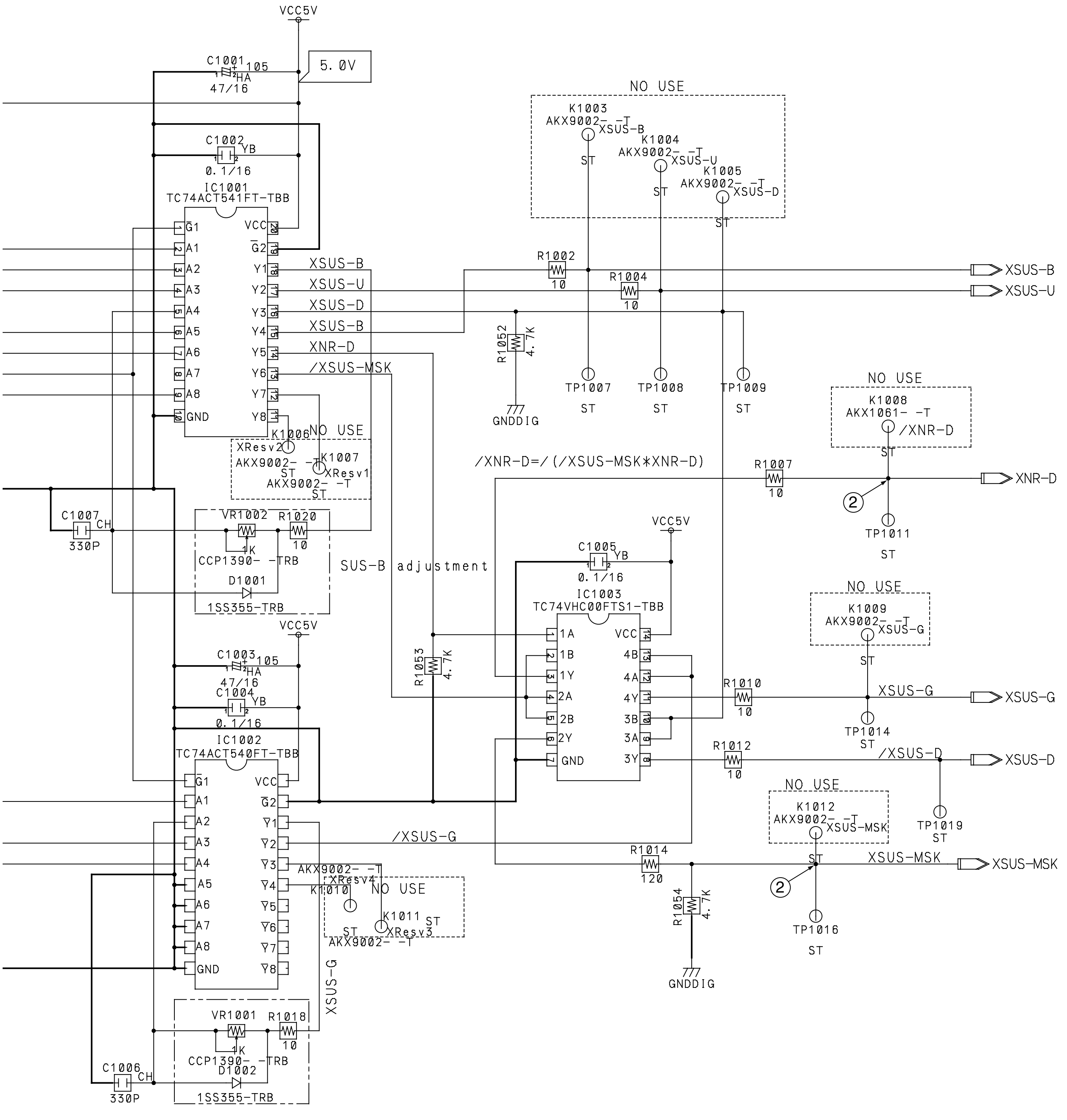
The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

SUS-G adjustment

	USED	VACANT
C	1001-1007	
CN	1001-1001	
D	1001-1002	
IC	1001-1003	
K	1002-1019	
R	1001-1092	1008, 1013, 1021-1050, 1055-1090,
S	1001-1001	
TP	1001-1092	1020-1049, 1051-1090,
VR	1001-1002	



AWV2293- 50 FHD
AWV2366- 607
TP1091 ST
TP1092 ST
R1091 0
R1092 0
ST
GNDDIG

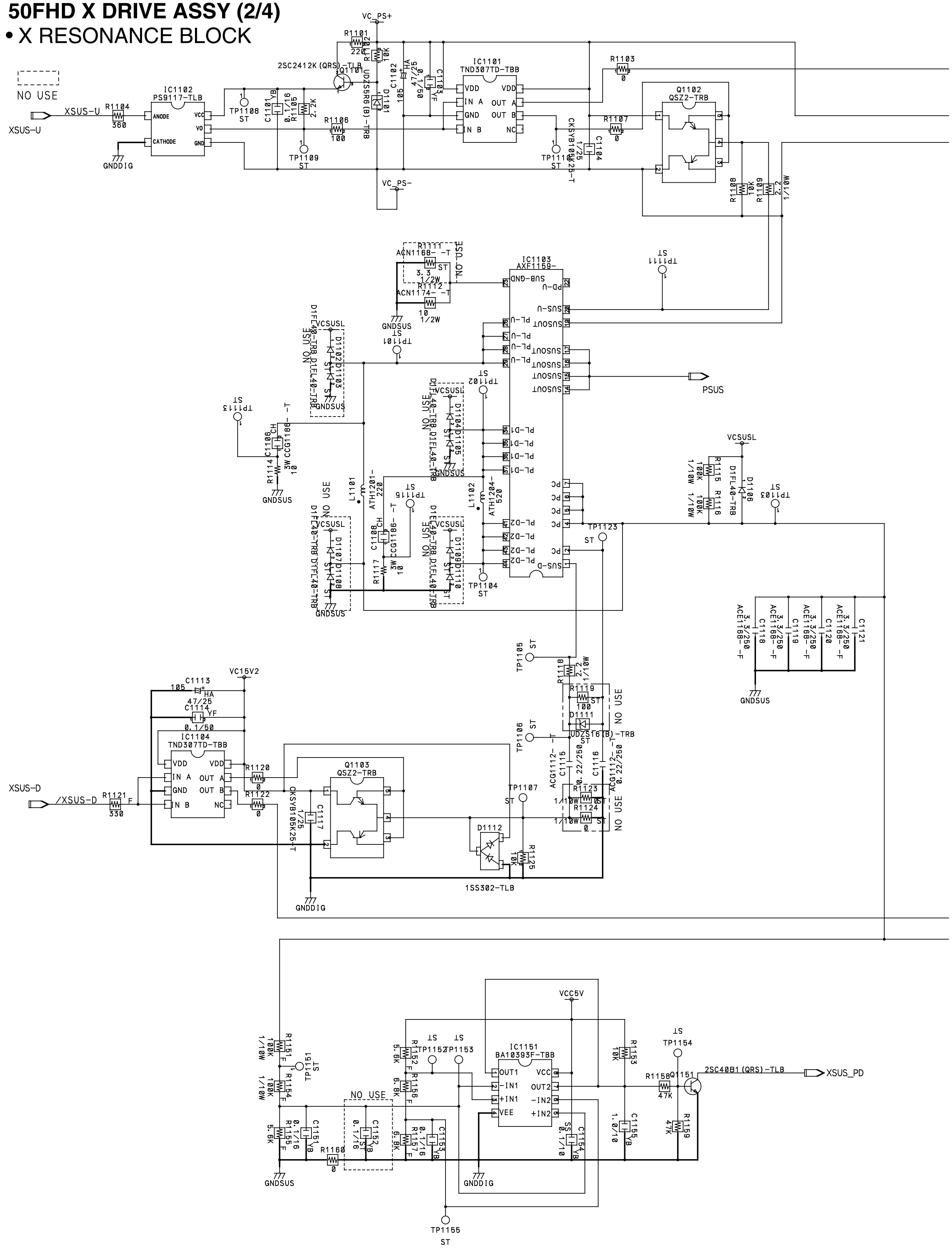


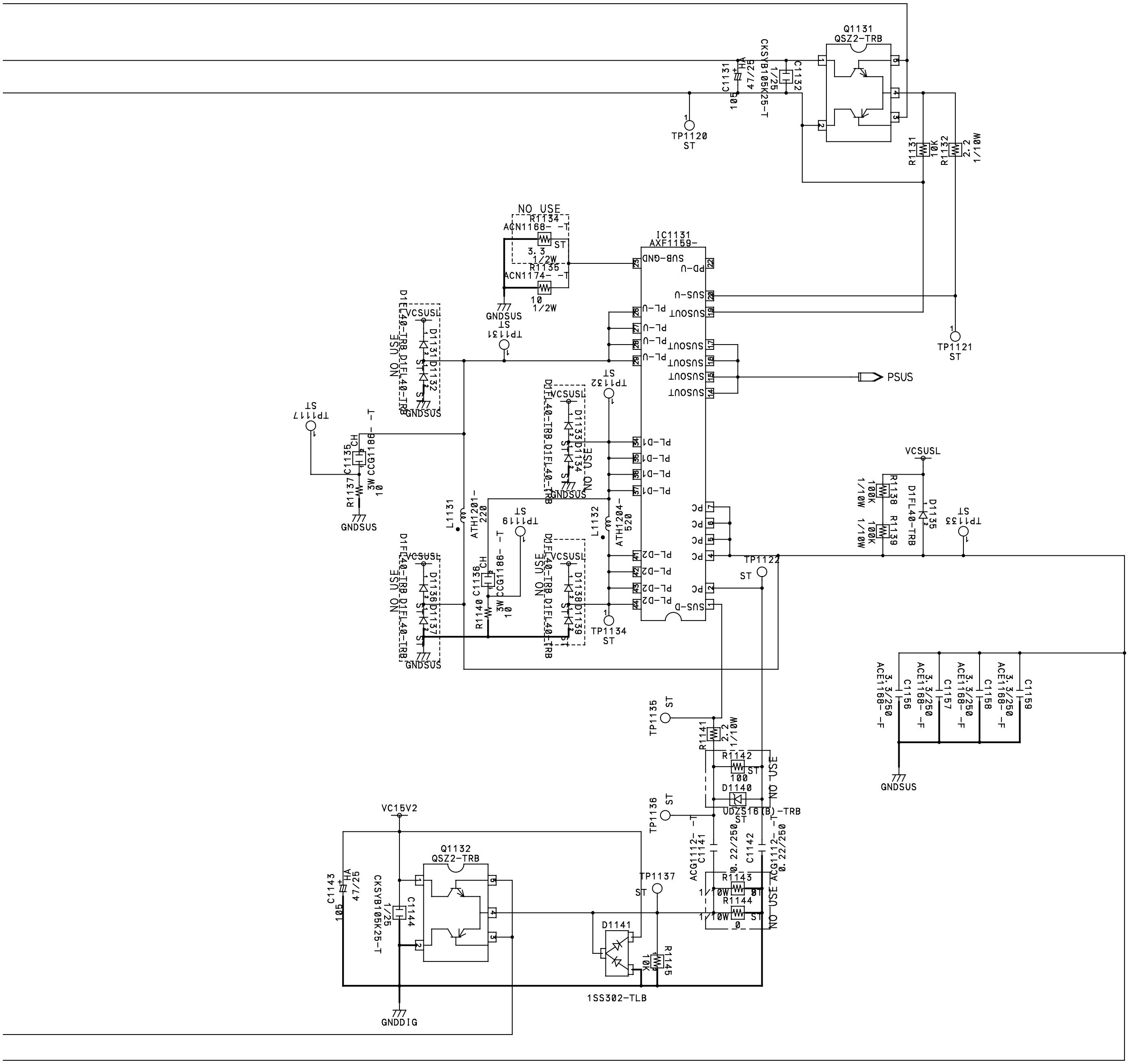
VCC5V
C1001 105 HA 47/16
5.0V
C1002 YB 0.1/16
IC1001 TC74ACT541FT-TBB
G1 A1 A2 A3 A4 A5 A6 A7 A8 GND
VCC G2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
XSUS-B
XSUS-U
XSUS-D
XSUS-B
XNR-D
/XSUS-MSK
NO USE
K1003 AKX9002- -T XSUS-B ST
K1004 AKX9002- -T XSUS-U ST
K1005 AKX9002- -T XSUS-D ST
R1002 10
R1004 10
R1052 4.7K
GNDDIG
TP1007 ST
TP1008 ST
TP1009 ST
XSUS-B
XSUS-U
NO USE
K1006 XResv2 AKX9002- -T ST
K1007 XResv1 AKX9002- -T ST
C1007 CH 330P
VR1002 1K
R1020 10
CCP1390- -TRB
D1001 1SS355-TRB
SUS-B adjustment
/XNR-D=/(/XSUS-MSK*XNR-D)
NO USE
K1008 AKX1061- -T /XNR-D ST
R1007 10
XNR-D
②
TP1011 ST
VCC5V
C1005 YB 0.1/16
IC1003 TC74VHC00FTS1-TBB
1A 1B 1Y 2A 2B 2Y GND
VCC 4B 4A 4Y 3B 3A 3Y
R1053 4.7K
NO USE
K1009 AKX9002- -T XSUS-G ST
R1010 10
XSUS-G
XSUS-G
TP1014 ST
R1012 10
/XSUS-D
XSUS-D
TP1019 ST
VCC5V
C1003 105 HA 47/16
C1004 YB 0.1/16
IC1002 TC74ACT540FT-TBB
G1 A1 A2 A3 A4 A5 A6 A7 A8 GND
VCC G2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
/XSUS-G
NO USE
K1012 AKX9002- -T XSUS-MSK ST
R1014 120
XSUS-MSK
XSUS-MSK
②
R1054 4.7K
GNDDIG
TP1016 ST
AKX9002- -T XResv4 K1010 ST
NO USE
K1011 XResv3 ST AKX9002- -T
XSUS-G
VR1001 1K
R1018 10
CCP1390- -TRB
D1002 1SS355-TRB
C1006 CH 330P

1.11 50FHD X DRIVE ASSY (2/4)

50FHD X DRIVE ASSY (2/4)

- X RESONANCE BLOCK


A
B
C
D
E
F
NO USE
XSUS-U
R1104
360
IC1102
PS9117-TLB
ANODE
CATHODE
VCC
VO
GND
GNDDIG
TP1108
ST
TP1109
ST
C1101
0.1/16
YB
R1105
2.2K
R1106
100
VC_PS+
R1101
220
R1102
10K
2SC2412K(QRS)-TLB
Q1101
UDZS6R8(B)-TRB
D1101
C1102
105
47/25
HA
C1103
0.1/50
YF
VC_PS-
IC1101
TND307TD-TBB
VDD
IN A
GND
IN B
OUT A
OUT B
NC
R1103
0
R1107
0
C1104
1/25
CKSYB105K25-T
TP1110
ST
Q1102
QSZ2-TRB
R1108
10K
R1109
2.2
1/10W
R1111
ACN1168- -T
3.3
1/2W
ST
NO USE
R1112
ACN1174- -T
10
1/2W
GNDSUS
TP1101
ST
IC1103
AXF1159-
SUB-GND
PD-U
SUS-U
SUSOUT
PL-U
PSUS
TP1111
ST
D1102
D1103
D1FL40-TRB
VCSUSL
NO USE
TP1102
ST
D1104
D1105
TP1113
ST
C1106
CCG1186- -T
CH
R1114
3W
10
L1101
ATH1201-
220
TP1115
ST
L1102
ATH1204-
520
PL-D1
PL-D2
PC
SUS-D
C1108
R1117
D1107
D1108
D1109
D1110
TP1104
ST
TP1123
ST
VCSUSL
R1115
100K
1/10W
R1116
100K
1/10W
D1106
D1FL40-TRB
TP1103
ST
C1118
C1119
C1120
C1121
3.3/250
ACE1168- -F
GNDSUS
TP1105
ST
R1118
2.2
1/10W
R1119
100
D1111
UDZS16(B)-TRB
NO USE
TP1106
ST
C1115
C1116
ACG1112- -T
0.22/250
TP1107
ST
R1123
R1124
0
1/10W
D1112
1SS302-TLB
R1125
10K
VC15V2
C1113
105
47/25
HA
C1114
0.1/50
YF
IC1104
TND307TD-TBB
XSUS-D
/XSUS-D
R1121
330
F
R1120
0
R1122
0
Q1103
QSZ2-TRB
C1117
1/25
CKSYB105K25-T
GNDDIG
VCC5V
IC1151
BA10393F-TBB
OUT1
-IN1
+IN1
VEE
VCC
OUT2
-IN2
+IN2
R1151
100K
1/10W
R1154
100K
1/10W
TP1151
ST
R1155
5.6K
C1151
0.1/16
YB
R1160
0
NO USE
C1152
0.1/16
R1152
5.6K
R1156
6.8K
R1157
6.8K
C1153
0.1/16
TP1152
TP1153
ST
R1153
10K
C1155
1.0/10
C1154
0.1/10
GNDSUS
GNDDIG
TP1155
ST
TP1154
ST
R1158
47K
Q1151
2SC4081(QRS)-TLB
R1159
47K
XSUS_PD

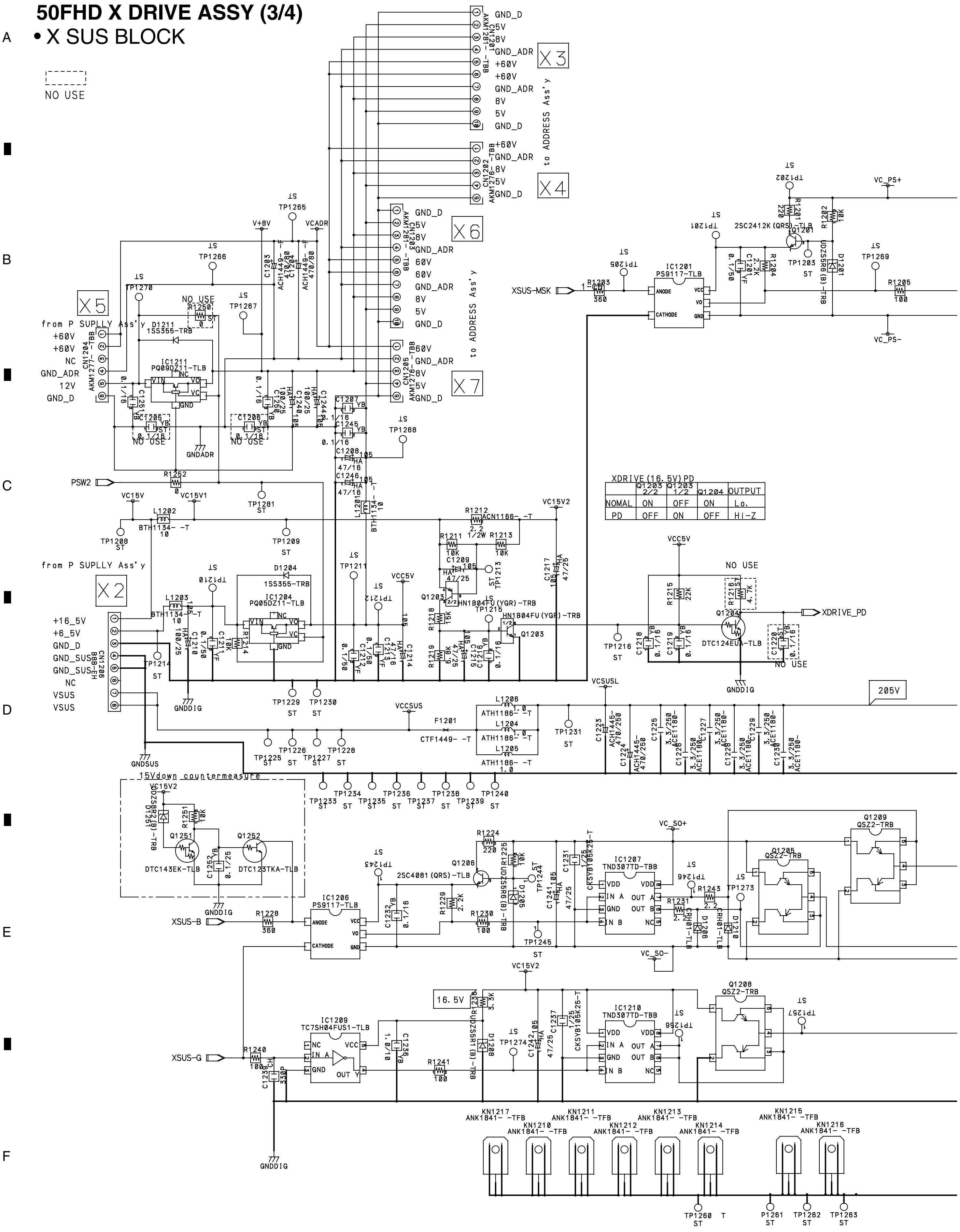

Q1131
QSZ2-TRB
C1131
HA
47/25
105
CKSYB105K25-T
1/25
C1132
TP1120
ST
R1131
10K
R1132
2.2
1/10W
NO USE
R1134
ACN1168- -T
ST
3.3
1/2W
R1135
ACN1174- -T
10
1/2W
GNDSUS
IC1131
AXF1159-
SUB-GND
PD-U
SUS-U
SUSOUT
PL-U
PL-D1
PL-D2
PC
SUS-D
TP1121
ST
PSUS
TP1131
ST
D1131
D1132
D1FL40-TRB
VCSUSL
NO USE
TP1117
ST
C1135
CH
CCG1186- -T
R1137
3W
10
L1131
ATH1201-
220
TP1132
ST
D1133
D1134
L1132
ATH1204-
520
TP1119
ST
C1136
CH
CCG1186- -T
R1140
3W
10
D1136
D1137
D1138
D1139
TP1134
ST
TP1122
ST
VCSUSL
R1138
100K
1/10W
R1139
100K
1/10W
D1135
D1FL40-TRB
TP1133
ST
C1156
C1157
C1158
C1159
3.3/250
ACE1168- -F
TP1135
ST
R1141
2.2
1/10W
R1142
100
ST
D1140
UDZS16(B)-TRB
ST
NO USE
TP1136
ST
ACG1112- -T
C1141
0.22/250
C1142
R1143
1/10W
0
R1144
TP1137
ST
VC15V2
Q1132
QSZ2-TRB
C1143
HA
47/25
105
CKSYB105K25-T
1/25
C1144
D1141
1SS302-TLB
R1145
10K
GNDDIG

	USED	VACANT
C	1101-1159	1105, 1107, 1109-1112, 1122-1130, 1133-1134, 1137-1140, 1145-1150,
D	1101-1141	1113-1130,
IC	1101-1151	1105-1130, 1132-1150,
L	1101-1132	1103-1130,
Q	1101-1151	1104-1130, 1133-1150,
R	1101-1160	1110, 1113, 1126-1130, 1133, 1136, 1146-1150,
TP	1101-1155	1112, 1114, 1116, 1118, 1124-1130, 1138-1150,

1.12 50FHD X DRIVE ASSY (3/4)

50FHD X DRIVE ASSY (3/4)

- X SUS BLOCK

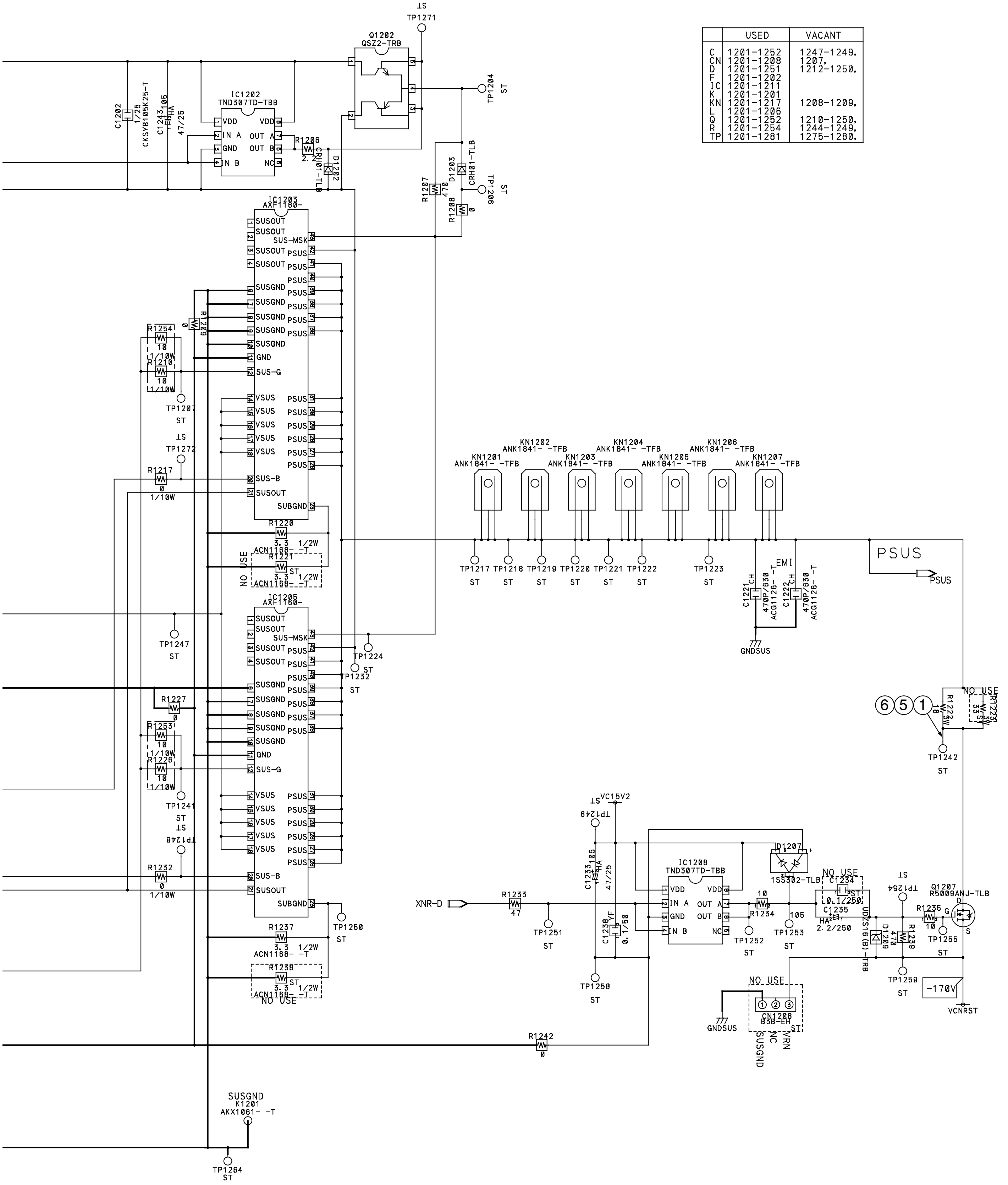


NO USE
X3
CN1201 AKM1281- -TBB
GND_D
5V
8V
GND_ADR
+60V
+60V
GND_ADR
8V
5V
GND_D
X4
CN1202 AKM1276- -TBB
+60V
GND_ADR
8V
5V
GND_D
to ADDRESS Ass'y
X6
CN1203 AKM1281- -TBB
60V
X7
CN1205 AKM1276- -TBB
X5
from P SUPLLY Ass'y
CN1204 AKM1277- -TBB
+60V
+60V
NC
GND_ADR
12V
GND_D
IC1211 PQ09DZ11-TLB
D1211 1SS355-TRB
R1250 0
GNDADR
PSW2
R1252 0
VC15V
VC15V1
L1202 BTH1134- -T 10
V+8V
VCADR
TP1265
TP1266
TP1267
TP1268
TP1270
TP1281
TP1208
TP1209
X2
CN1206 B8B-EH
+16_5V
+6_5V
GND_D
GND_SUS
GND_SUS
NC
VSUS
VSUS
L1203 BTH1134- -T
IC1204 PQ05DZ11-TLB
D1204 1SS355-TRB
GNDDIG
GNDSUS
VCC5V
VC15V2
R1212 2.2 1/2W ACN1166- -T
R1211 10K
R1213 10K
Q1203 HN1B04FU(YGR)-TRB
XDRIVE(16.5V)PD
VCC5V
NO USE
R1215 22K
R1216 4.7K
Q1204 DTC124EUA-TLB
XDRIVE_PD
GNDDIG
XSUS-MSK
R1203 360
IC1201 PS9117-TLB
ANODE
CATHODE
VCC
VO
GND
2SC2412K(QRS)-TLB Q1201
R1201 220
R1202 10K
R1204 2.2K
D1201 UDZS5R6(B)-TRB
R1205 100
VC_PS+
VC_PS-
TP1201
TP1202
TP1203
TP1205
TP1269
VCCSUS
F1201 CTF1449- -T
L1206 ATH1186- -T 1.0
L1204 ATH1186- -T 1.0
L1205 ATH1186- -T 1.0
VCSUSL
205V
C1223 ACH1445- 470/250
C1224 ACH1445- 470/250
TP1225 TP1226 TP1227 TP1228 TP1229 TP1230 TP1231
TP1233 TP1234 TP1235 TP1236 TP1237 TP1238 TP1239 TP1240
15Vdown countermeasure
D1261 UDZS8R2(B)-TRB
R1251 10K
Q1251 DTC143EK-TLB
Q1252 DTC123TKA-TLB
XSUS-B
R1228 360
IC1206 PS9117-TLB
Q1206 2SC4081(QRS)-TLB
R1224 220
R1225 10K
D1205 UDZS5R6(B)-TRB
R1229 2.2K
R1230 100
VC_SO+
VC_SO-
IC1207 TND307TD-TBB
VDD
IN A
GND
IN B
OUT A
OUT B
NC
R1231 2.2
R1243 2.2
D1206 CRH01-TLB
D1210 CRH01-TLB
Q1205 QSZ2-TRB
Q1209 QSZ2-TRB
TP1243 TP1244 TP1245 TP1246 TP1273
16.5V
R1236 3.3K
D1208 UDZS5R1(B)-TRB
IC1209 TC7SH04FUS1-TLB
XSUS-G
R1240 100
C1235 330P
R1241 100
IC1210 TND307TD-TBB
Q1208 QSZ2-TRB
TP1256 TP1257 TP1274
KN1217 ANK1841- -TFB
KN1210 ANK1841- -TFB
KN1211 ANK1841- -TFB
KN1212 ANK1841- -TFB
KN1213 ANK1841- -TFB
KN1214 ANK1841- -TFB
KN1215 ANK1841- -TFB
KN1216 ANK1841- -TFB
TP1260 TP1261 TP1262 TP1263

XDRIVE(16.5V)PD

	Q1203 2/2	Q1203 1/2	Q1204	OUTPUT
NOMAL	ON	OFF	ON	Lo.
PD	OFF	ON	OFF	Hi-Z

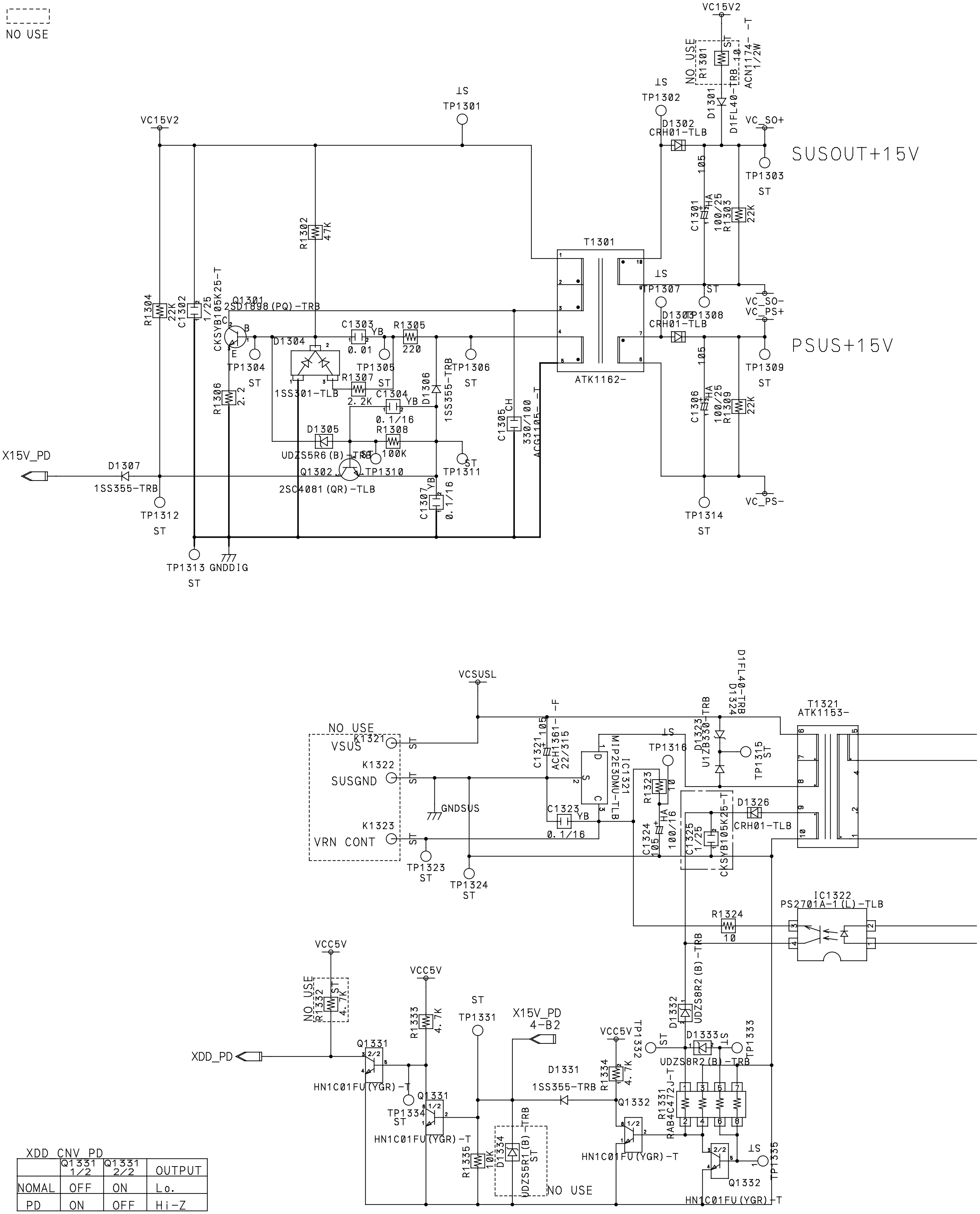
	USED	VACANT
C	1201-1252	1247-1249,
CN	1201-1208	1207,
D	1201-1251	1212-1250,
F	1201-1202	
IC	1201-1211	
K	1201-1201	
KN	1201-1217	1208-1209,
L	1201-1206	
Q	1201-1252	1210-1250,
R	1201-1254	1244-1249,
TP	1201-1281	1275-1280,


TP1271
ST
Q1202
QSZ2-TRB
TP1204
ST
C1202
1/25
CKSYB106K25-T
C1243
105
HA
47/25
IC1202
TND307TD-TBB
VDD
IN A
GND
IN B
OUT A
OUT B
NC
R1206
2.2
D1202
CRH01-TLB
R1207
470
D1203
CRH01-TLB
R1208
0
TP1206
ST
IC1203
AXF1160-
SUSOUT
SUS-MSK
PSUS
SUSGND
GND
SUS-G
VSUS
SUS-B
SUBGND
R1209
0
R1254
10
1/10W
R1210
10
1/10W
TP1207
ST
TP1272
ST
R1217
0
1/10W
R1220
3.3 1/2W
ACN1168- -T
R1221
3.3 1/2W
ACN1168- -T
NO USE
KN1201
ANK1841- -TFB
KN1202
ANK1841- -TFB
KN1203
ANK1841- -TFB
KN1204
ANK1841- -TFB
KN1205
ANK1841- -TFB
KN1206
ANK1841- -TFB
KN1207
ANK1841- -TFB
TP1217 TP1218 TP1219 TP1220 TP1221 TP1222 TP1223
ST
EMI
C1221
C1222
CH
470P/630
ACG1126- -T
GNDSUS
PSUS
IC1205
AXF1160-
TP1247
ST
TP1224
ST
TP1232
ST
R1227
0
R1253
10
1/10W
R1226
10
1/10W
TP1241
ST
TP1248
ST
R1232
0
1/10W
TP1250
ST
R1237
3.3 1/2W
ACN1168- -T
R1238
3.3 1/2W
ACN1168- -T
NO USE
R1242
0
SUSGND
K1201
AKX1061- -T
TP1264
ST
NO USE
R1222
18
3W
R1225
33 3W
⑥⑤①
TP1242
ST
VC15V2
TP1249
ST
C1233
105
HA
47/25
C1236
YF
0.1/50
TP1258
ST
XNR-D
R1233
47
TP1251
ST
IC1208
TND307TD-TBB
D1207
1SS302-TLB
10
R1234
TP1252
ST
105
TP1253
ST
NO USE
C1234
0.1/250
C1235
HA
2.2/250
UDZS16(B)-TRB
D1209
R1239
470
R1235
10
TP1254
ST
Q1207
R5009ANJ-TLB
G D S
TP1255
ST
TP1259
ST
-170V
VCNRST
NO USE
CN1206
B3B-EH
① ② ③
GNDSUS
SUSGND
NC
VRN

1.13 50FHD X DRIVE ASSY (4/4)

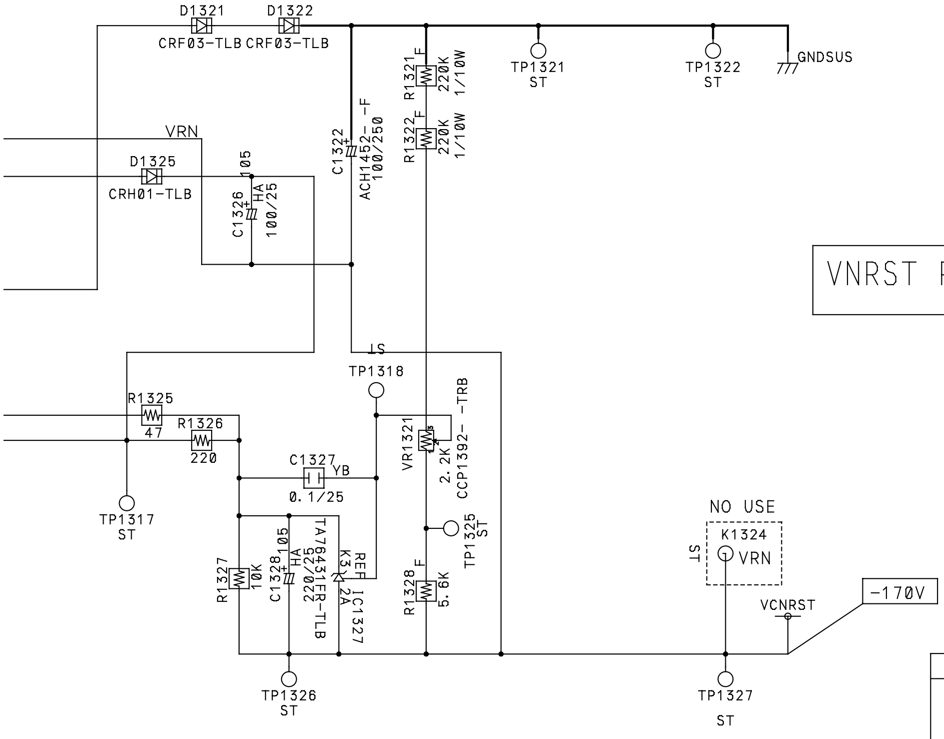
50 X DRIVE ASSY (4/4)

- X D-D CON BLOCK


NO USE
VC15V2
TP1301 ST
TP1302 ST
R1301 NO USE ST
ACN1174- -T 1/2W
D1301 D1FL40-TRB
D1302 CRH01-TLB
VC_SO+
SUSOUT+15V
TP1303 ST
C1301 105 HA 100/25
R1303 22K
R1302 47K
T1301 ATK1162-
TP1307 ST
TP1308 ST
VC_SO-
VC_PS+
D1303 CRH01-TLB
PSUS+15V
TP1309 ST
C1306 105 HA 100/25
R1309 22K
R1304 22K
C1302 1/25 CKSYB105K25-T
Q1301 2SD1898(PQ)-TRB
C1303 YB 0.01
R1305 220
D1304 1SS301-TLB
TP1304 ST
TP1305 ST
R1307 2.2K
C1304 YB 0.1/16
D1306 1SS355-TRB
TP1306 ST
C1305 CH 330/100 ACG1105- -T
R1306 2.2
D1305 UDZS5R6(B)-TRB
R1308 100K
Q1302 2SC4081(QR)-TLB
TP1310
TP1311 ST
C1307 YB 0.1/16
X15V_PD
D1307 1SS355-TRB
TP1312 ST
TP1313 ST
GNDDIG
TP1314 ST
VC_PS-
VCSUSL
NO USE
K1321 VSUS ST
K1322 SUSGND ST
K1323 VRN CONT ST
GNDSUS
TP1323 ST
TP1324 ST
C1321 105 ACH1361- -F 22/315
IC1321 MIP2E3DMU-TLB
D S C
C1323 YB 0.1/16
R1323 10
TP1316 ST
D1323 U1ZB330-TRB
D1324 D1FL40-TRB
TP1315 ST
C1324 105 HA 100/16
C1325 1/25 CKSYB105K25-T
D1326 CRH01-TLB
T1321 ATK1153-
IC1322 PS2701A-1(L)-TLB
R1324 10
VCC5V
R1332 NO USE ST 4.7K
XDD_PD
Q1331 HN1C01FU(YGR)-T
R1333 4.7K
TP1331 ST
X15V_PD 4-B2
TP1334 ST
D1331 1SS355-TRB
R1335 10K
D1334 UDZS5R1(B)-TRB ST NO USE
R1334 4.7K
TP1332 ST
D1332 UDZS8R2(B)-TRB
D1333 UDZS8R2(B)-TRB ST
TP1333
R1331 RAB4C472J-T
Q1332 HN1C01FU(YGR)-T
TP1335 ST

XDD CNV PD

	Q1331 1/2	Q1331 2/2	OUTPUT
NOMAL	OFF	ON	Lo.
PD	ON	OFF	Hi-Z


D1321
CRF03-TLB
D1322
CRF03-TLB
GNDSUS
TP1321
ST
TP1322
ST
R1321
F
220K
1/10W
R1322
F
220K
1/10W
C1322
ACH1452- -F
100/250
VRN
D1325
CRH01-TLB
C1326
105
HA
100/25
ST
TP1318
R1325
47
R1326
220
C1327
YB
0.1/25
VR1321
2.2K
CCP1392- -TRB
TP1317
ST
TP1325
ST
R1327
10K
C1328
105
HA
220/25
TA76431FR-TLB
REF
K3
2A
IC1327
R1328
F
5.6K
TP1326
ST
NO USE
K1324
VRN
ST
VCNRST
-170V
TP1327
ST

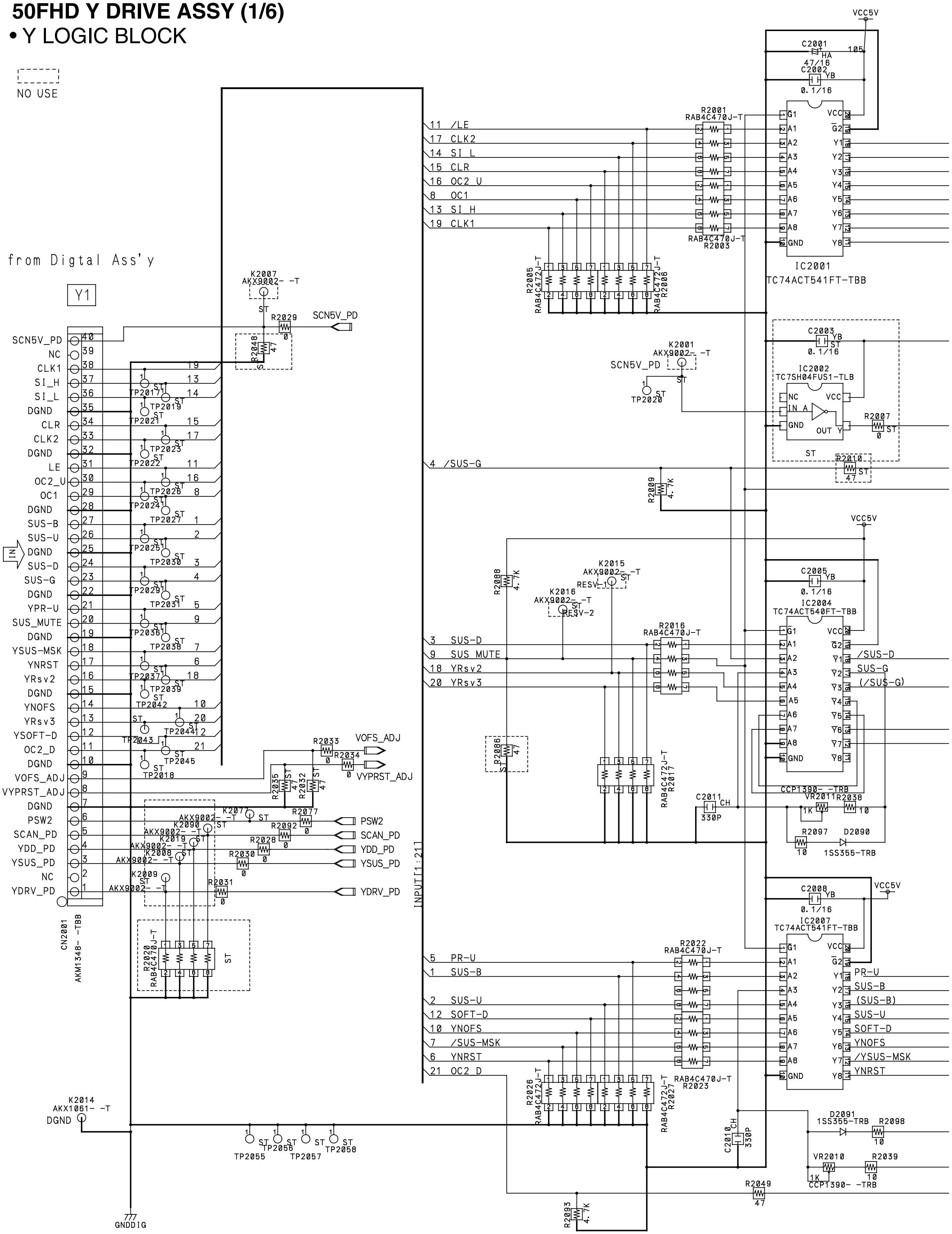
VNRST Regulator

	USED	VACANT
C	1301-1328	1308-1320,
D	1301-1334	1308-1320, 1327-1330,
IC	1321-1327	1323-1326,
K	1321-1324	
Q	1301-1332	1303-1330,
R	1301-1335	1310-1320, 1329-1330,
T	1301-1321	1302-1320,
TP	1301-1335	1319-1320, 1328-1330,
VR	1321-1321	

1.14 50FHD Y DRIVE ASSY (1/6)

50FHD Y DRIVE ASSY (1/6)

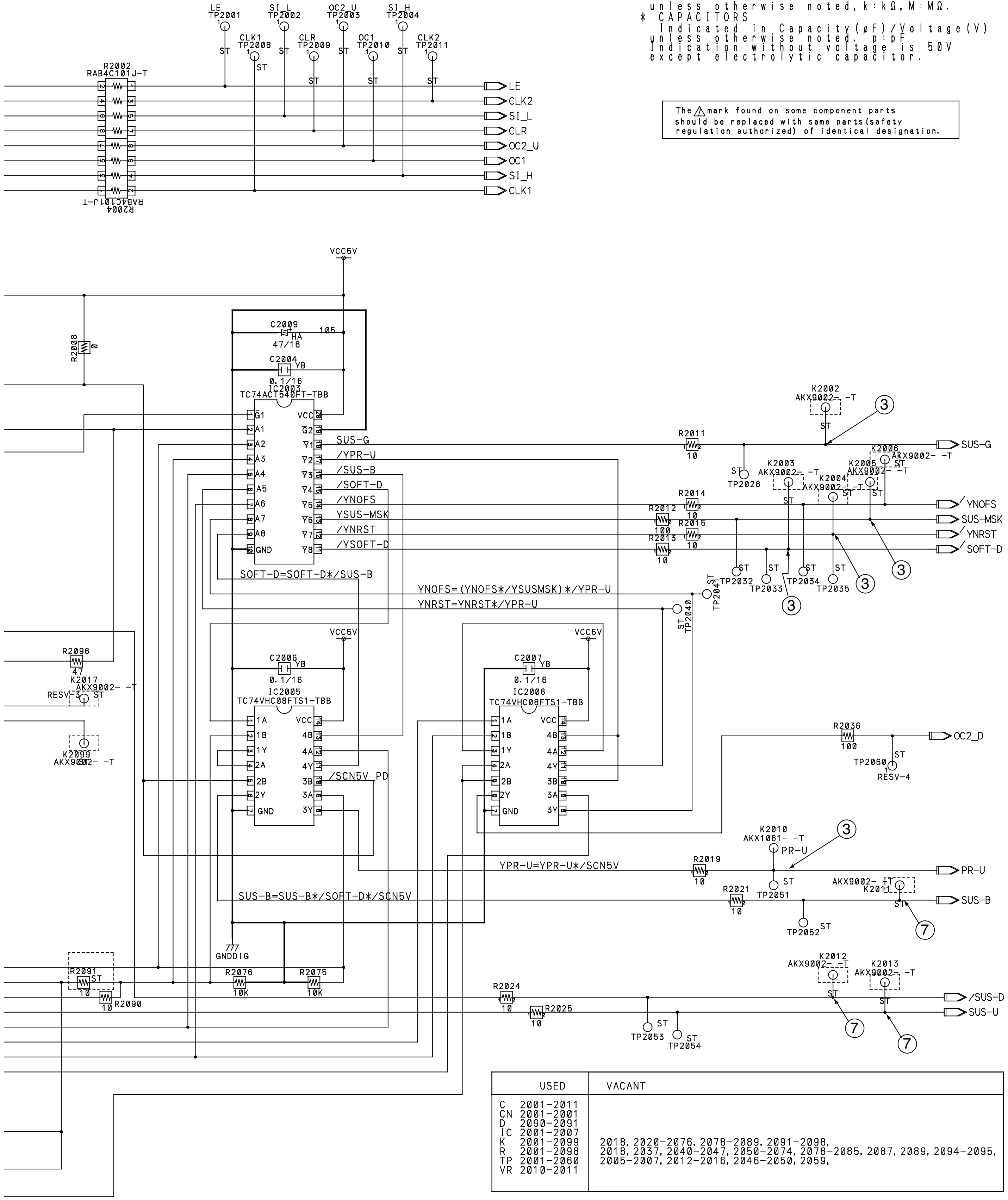
- Y LOGIC BLOCK


NO USE
from Digtal Ass'y
Y1
CN2001
AKM1348- -TBB
SCN5V_PD
NC
CLK1
SI_H
SI_L
DGND
CLR
CLK2
LE
OC2_U
OC1
SUS-B
SUS-U
IN
SUS-D
SUS-G
YPR-U
SUS_MUTE
YSUS-MSK
YNRST
YRsv2
YNOFS
YRsv3
YSOFT-D
OC2_D
VOFS_ADJ
VYPRST_ADJ
PSW2
SCAN_PD
YDD_PD
YSUS_PD
YDRV_PD
K2007
AKX9002- -T
R2029
R2048
SCN5V_PD
R2033
R2034
VOFS_ADJ
VYPRST_ADJ
R2035
R2032
K2077
K2090
K2019
K2008
K2009
R2077
R2092
R2028
R2030
R2031
R2020
RAB4C470J-T
PSW2
SCAN_PD
YDD_PD
YSUS_PD
YDRV_PD
INPUT[1:21]
11 /LE
17 CLK2
14 SI L
15 CLR
16 OC2 U
8 OC1
13 SI H
19 CLK1
4 /SUS-G
3 SUS-D
9 SUS MUTE
18 YRsv2
20 YRsv3
5 PR-U
1 SUS-B
2 SUS-U
12 SOFT-D
10 YNOFS
7 /SUS-MSK
6 YNRST
21 OC2 D
VCC5V
C2001
HA
47/16
C2002
YB
0.1/16
R2001
RAB4C470J-T
R2003
R2005
RAB4C472J-T
R2006
IC2001
TC74ACT541FT-TBB
C2003
K2001
AKX9002- -T
SCN5V_PD
TP2020
IC2002
TC7SH04FUS1-TLB
R2007
R2010
R2009
4.7K
R2088
K2015
RESV-1
K2016
RESV-2
C2005
IC2004
TC74ACT540FT-TBB
R2016
RAB4C470J-T
/SUS-D
SUS-G
(/SUS-G)
R2086
R2017
RAB4C472J-T
C2011
CH
330P
CCP1390- -TRB
VR2011
1K
R2038
R2097
D2090
1SS355-TRB
C2008
IC2007
TC74ACT541FT-TBB
R2022
PR-U
SUS-B
(SUS-B)
SUS-U
SOFT-D
YNOFS
/YSUS-MSK
YNRST
R2026
R2027
R2023
C2010
D2091
1SS355-TRB
R2098
VR2010
R2039
CCP1390- -TRB
R2049
R2093
K2014
AKX1061- -T
DGND
TP2055
TP2056
TP2057
TP2058
GNDDIG

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance unless otherwise noted, k : kΩ, M : MΩ.

* CAPACITORS
Indicated in Capacity (µF) / Voltage (V) unless otherwise noted. p : pF
Indication without voltage is 50V except electrolytic capacitor.

The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.



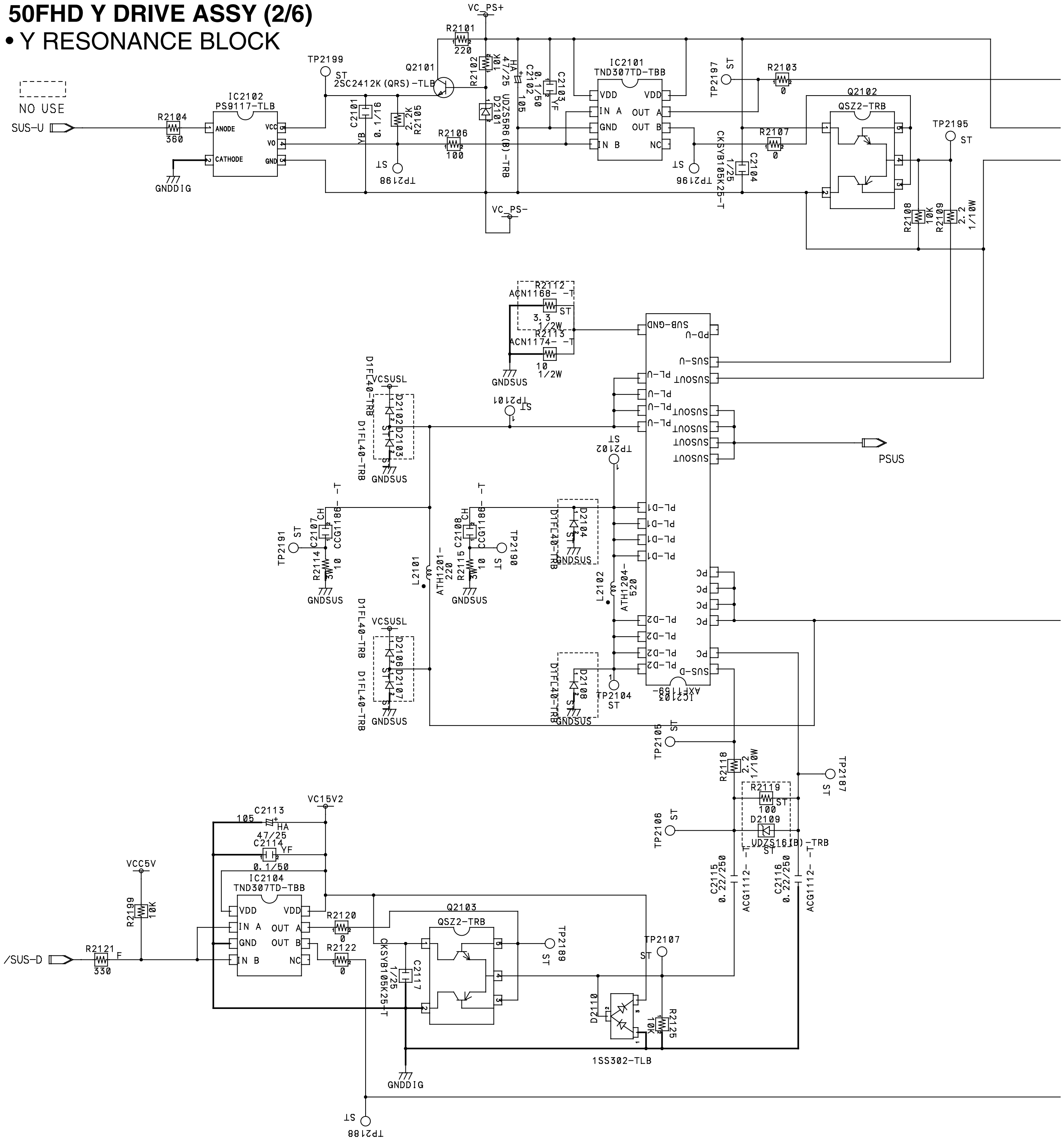
LE TP2001
SI_L TP2002
OC2_U TP2003
SI_H TP2004
CLK1 TP2008
CLR TP2009
OC1 TP2010
CLK2 TP2011
ST
R2002 RAB4C101J-T
R2004 RAB4C101J-T
LE
CLK2
SI_L
CLR
OC2_U
OC1
SI_H
CLK1
VCC5V
R2008 0
C2009 HA 47/16
105
C2004 YB 0.1/16
IC2003 TC74ACT540FT-TBB
G1 A1 A2 A3 A4 A5 A6 A7 A8 GND
VCC G2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
SUS-G
/YPR-U
/SUS-B
/SOFT-D
/YNOFS
YSUS-MSK
/YNRST
/YSOFT-D
SOFT-D=SOFT-D*/SUS-B
YNOFS=(YNOFS*/YSUSMSK)*/YPR-U
YNRST=YNRST*/YPR-U
K2002 AKX9002- -T
R2011 10
TP2028
K2003 AKX9002- -T
K2004 AKX9002- -T
K2005 AKX9002- -T
K2006 AKX9002- -T
R2014 10
R2012 100
R2015 10
R2013 10
TP2032
TP2033
TP2034
TP2035
TP2041
TP2040
SUS-G
YNOFS
SUS-MSK
YNRST
SOFT-D
3
R2096 47
K2017 AKX9002- -T
RESV-3
K2099 AKX9002- -T
C2006 YB 0.1/16
IC2005 TC74VHC08FTS1-TBB
1A 1B 1Y 2A 2B 2Y GND
VCC 4B 4A 4Y 3B 3A 3Y
/SCN5V_PD
C2007 YB 0.1/16
IC2006 TC74VHC08FTS1-TBB
R2036 100
OC2_D
TP2060
RESV-4
K2010 AKX1061- -T
PR-U
R2019 10
YPR-U=YPR-U*/SCN5V
TP2051
PR-U
R2021 10
SUS-B=SUS-B*/SOFT-D*/SCN5V
AKX9002- -T K2011
SUS-B
TP2052
7
GNDDIG
R2091 10
R2090 10
R2076 10K
R2075 10K
R2024 10
R2025 10
K2012 AKX9002- -T
K2013 AKX9002- -T
/SUS-D
SUS-U
TP2053
TP2054

USED		VACANT
C	2001-2011	
CN	2001-2001	
D	2090-2091	
IC	2001-2007	
K	2001-2099	2018, 2020-2076, 2078-2089, 2091-2098,
R	2001-2098	2018, 2037, 2040-2047, 2050-2074, 2078-2085, 2087, 2089, 2094-2095,
TP	2001-2060	2005-2007, 2012-2016, 2046-2050, 2059,
VR	2010-2011	

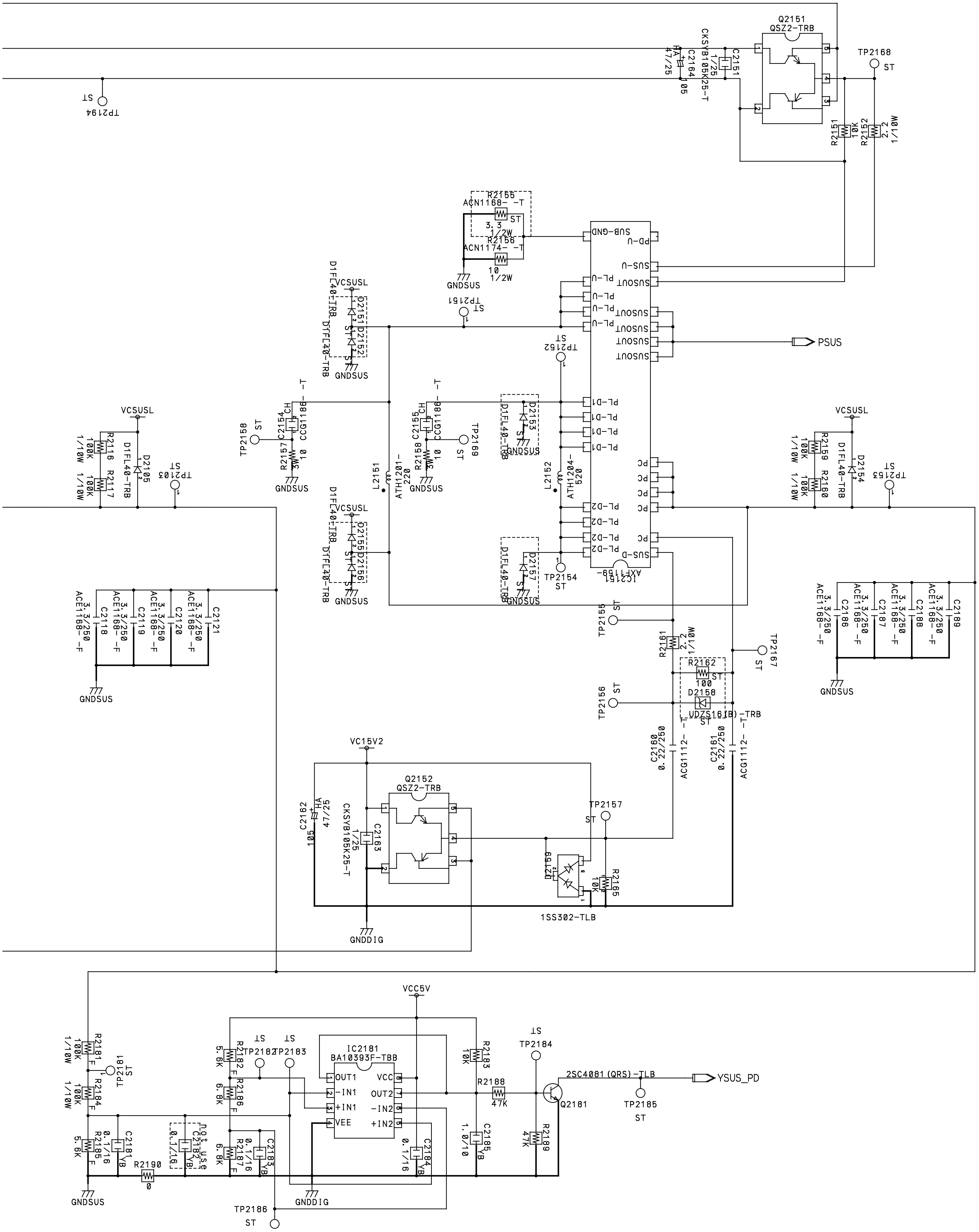
1.15 50FHD Y DRIVE ASSY (2/6)

50FHD Y DRIVE ASSY (2/6)

- Y RESONANCE BLOCK


VC_PS+
R2101
220
TP2199
ST
Q2101
2SC2412K(QRS)-TLB
R2102 1K
HA 47/25
C2102 0.1/50
C2103 YF
105
D2101 UDZS6R8(B)-TRB
IC2101
TND307TD-TBB
VDD
IN A
OUT A
GND
OUT B
IN B
NC
TP2197
R2103
0
Q2102
QSZ2-TRB
TP2195
NO USE
IC2102
PS9117-TLB
R2104
360
SUS-U
ANODE
CATHODE
VCC
VO
GND
GNDDIG
C2101 YB 0.1/16
R2105 2.2K
R2106
100
TP2198
R2107
0
C2104 1/25
CKSYB105K25-T
TP2196
VC_PS-
R2108 10K
R2109 2.2 1/10W
R2112
ACN1168- -T
3.3 1/2W
R2113
ACN1174- -T
10 1/2W
GNDSUS
SUB-GND
PD-U
SUS-U
SUSOUT
PL-U
TP2101
TP2102
PSUS
VCSUSL
D2102
D2103
D1FL40-TRB
TP2191
C2107 CH
CCG1186- -T
R2114 10 3W
L2101
ATH1201-220
C2108 CH
R2115 10 3W
TP2190
D2104
L2102
ATH1204-520
PL-D1
PC
PL-D2
SUS-D
IC2103
AXF1159-
D2106
D2107
D2108
TP2104
TP2105
R2118 2.2 1/10W
TP2187
R2119
100
D2109
UDZS16(B)-TRB
TP2106
C2115 0.22/250
ACG1112- -T
C2116 0.22/250
VC15V2
C2113
105
HA 47/25
C2114 YF
0.1/50
IC2104
TND307TD-TBB
VCC5V
R2199 10K
R2121
330
F
/SUS-D
R2120
0
R2122
0
Q2103
QSZ2-TRB
C2117 1/25
CKSYB105K25-T
TP2189
TP2107
D2110
R2125 10K
1SS302-TLB
GNDDIG
TP2188

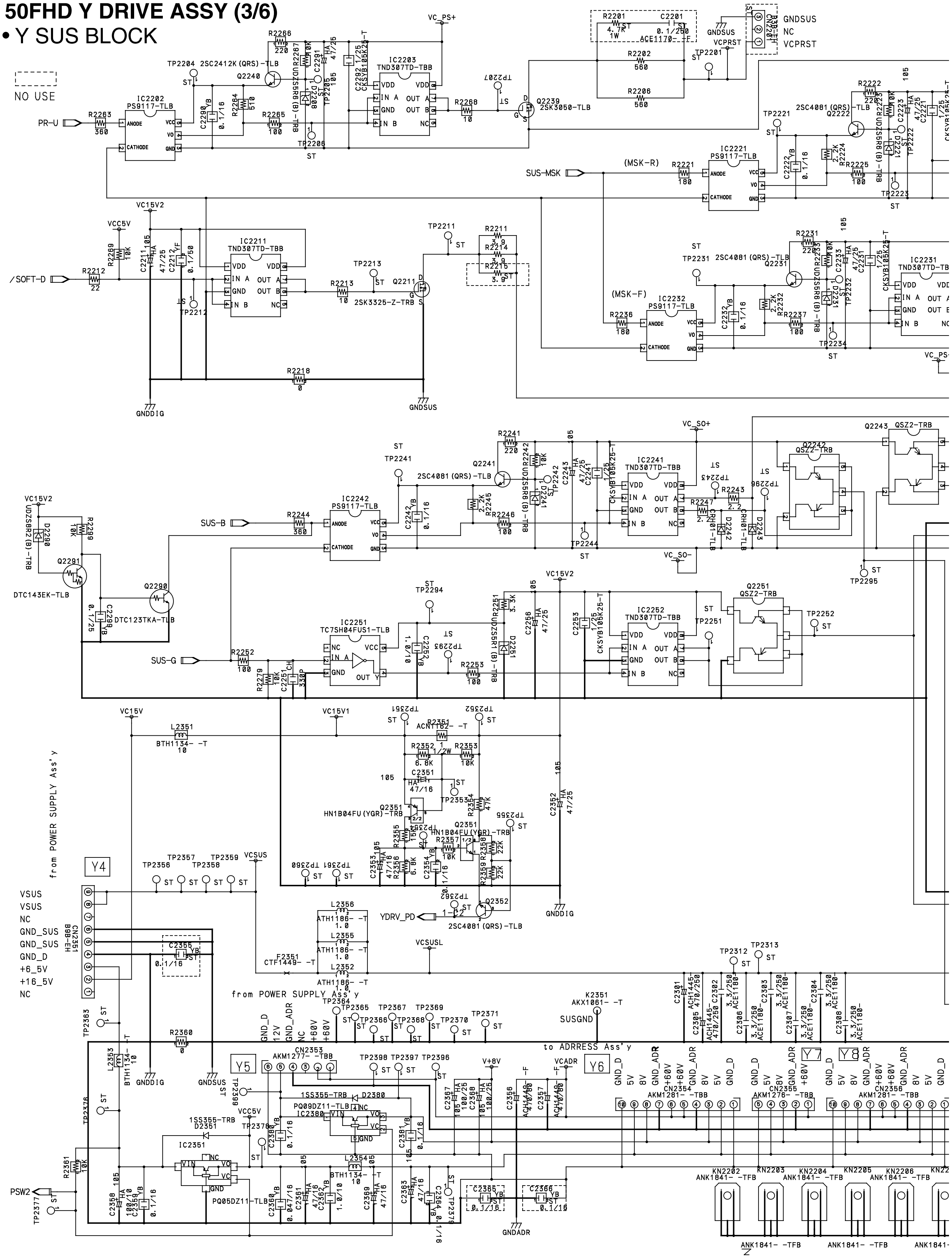
USED	VACANT
C 2101-2189	2105-2106, 2109-2112, 2122-2150, 2152-2153, 2156-2159, 2165-2180,
D 2101-2159	2111-2150,
IC 2101-2181	2105-2150, 2152-2180,
L 2101-2152	2103-2150,
Q 2101-2181	2104-2150, 2153-2180,
R 2101-2199	2110-2111, 2123-2124, 2126-2150, 2153-2154, 2163-2164, 2166-2180, 2191-2198,
TP 2101-2199	2108-2150, 2159-2166, 2170-2180, 2192-2193,


TP2194
ST
Q2151
QSZ2-TRB
C2164
47/25
HA
105
CKSYB105K25-T
1/25
C2151
TP2168
ST
R2151
10K
R2152
2.2
1/10W
R2155
ACN1168- -T
ST
3.3
1/2W
R2156
ACN1174- -T
10
1/2W
GNDSUS
SUB-GND
PD-U
SUS-U
SUSOUT
PL-U
SUSOUT
PSUS
PL-D1
PC
PL-D2
SUS-D
IC2151
AXF1159-
TP2151
ST
TP2152
ST
VCSUSL
D2151
D2152
D1FL40-TRB
GNDSUS
C2154
CH
CCG1186- -T
10
3KV
R2157
TP2158
ST
C2155
CH
CCG1186- -T
R2158
TP2169
ST
D2153
D1FL40-TRB
GNDSUS
L2151
ATH1201-
220
L2152
ATH1204-
520
D2155
D2156
D1FL40-TRB
D2157
D1FL40-TRB
TP2154
ST
VCSUSL
R2116
100K
1/10W
R2117
100K
1/10W
D2105
D1FL40-TRB
TP2103
ST
C2118
C2119
C2120
C2121
3.3/250
ACE1168- -F
GNDSUS
VCSUSL
R2159
100K
1/10W
R2160
100K
1/10W
D2154
D1FL40-TRB
TP2153
ST
C2186
C2187
C2188
C2189
3.3/250
ACE1168- -F
GNDSUS
TP2155
ST
R2161
2.2
1/10W
TP2167
ST
R2162
100
ST
D2158
UDZS16(B)-TRB
ST
TP2156
ST
C2160
0.22/250
ACG1112- -T-
C2161
0.22/250
ACG1112- -T-
VC15V2
Q2152
QSZ2-TRB
C2162
105
HA
47/25
CKSYB105K25-T
1/25
C2163
TP2157
ST
D2159
R2165
10K
1SS302-TLB
GNDDIG
VCC5V
R2181
100K
1/10W
F
TP2181
ST
R2184
100K
1/10W
F
R2185
5.6K
F
C2181
0.1/16
YB
R2190
0
C2182
0.1/16
YB
not use
GNDSUS
R2182
5.6K
F
R2186
6.8K
F
R2187
6.8K
F
C2183
0.1/16
YB
TP2182
ST
TP2183
ST
IC2181
BA10393F-TBB
OUT1
-IN1
+IN1
VEE
VCC
OUT2
-IN2
+IN2
C2184
0.1/16
YB
GNDDIG
TP2186
ST
R2183
10K
R2188
47K
C2185
1.0/10
YB
TP2184
ST
R2189
47K
2SC4081(QRS)-TLB
Q2181
TP2185
ST
YSUS_PD

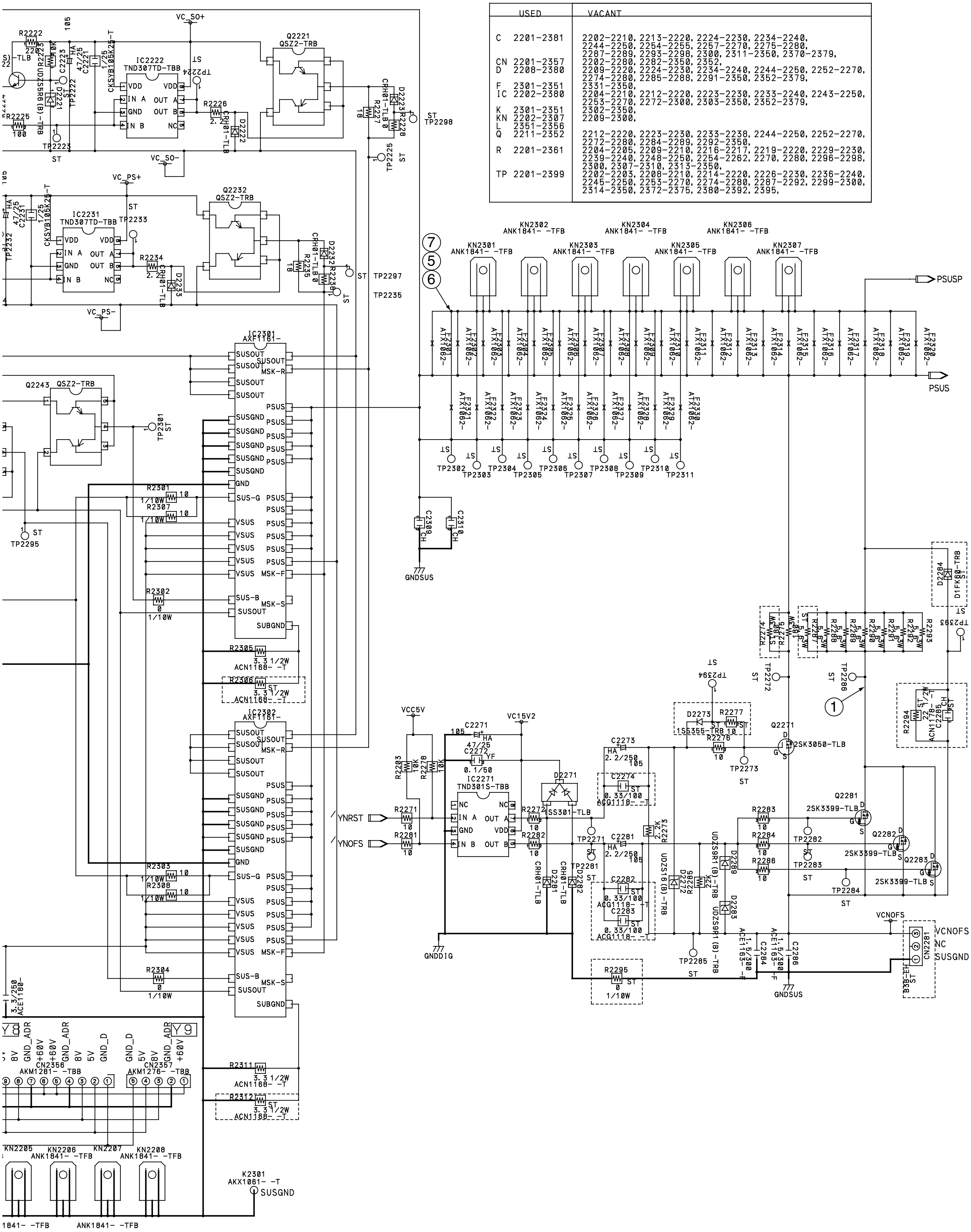
1.16 50FHD Y DRIVE ASSY (3/6)

50FHD Y DRIVE ASSY (3/6)

• Y SUS BLOCK


NO USE
PR-U
R2263 360
IC2202 PS9117-TLB
ANODE
CATHODE
VCC
VO
GND
C2290 YB 0.1/16
R2264 510
TP2204 2SC2412K (QRS)-TLB
Q2240
R2266 220
R2267 10K
R2265 100
UDZS5R6(B)-TRB D2208
C2291 HA 47/25
TP2205
TP2206
VC_PS+
C2292 1/25 CKSYB105K25-T
IC2203 TND307TD-TBB
VDD
IN A
OUT A
OUT B
IN B
NC
R2268 10
TP2207
Q2239 2SK3050-TLB
R2201 4.7K 1W
C2201 0.1/250 ACE1170- -F
R2202 560
R2206 560
TP2201
GNDSUS
NC
VCPRST
CN2201
SUS-MSK
(MSK-R)
R2221 180
IC2221 PS9117-TLB
C2222 YB 0.1/16
R2224 2.2K
R2225 100
R2222 220
TP2221
2SC4081 (QRS)-TLB Q2222
D2222
C2223
C2221
TP2222
TP2223
VC15V2
VCC5V
R2269 10K
C2211 HA 47/25
C2212 YF 0.1/50
IC2211 TND307TD-TBB
/SOFT-D
R2212 22
TP2212
R2213 10
TP2213
Q2211 2SK3325-Z-TRB
TP2211
R2211 3.9
R2214 3.9
R2215 3.9
R2218 0
GNDDIG
GNDSUS
TP2231 2SC4081 (QRS)-TLB
Q2231
R2231 220
R2233 10K
C2233 HA 47/25
C2231 1/25 CKSYB105K25-T
IC2231 TND307TD-TB
(MSK-F)
R2236 180
IC2232 PS9117-TLB
C2232 YB 0.1/16
R2232 2.2K
R2237 100
D2231
TP2232
TP2234
VC_PS
VC_SO+
R2241 220
R2242 10K
Q2241 2SC4081 (QRS)-TLB
TP2241
C2242 YB 0.1/16
R2245 2.2K
R2246 100
D2241 UDZS5R6(B)-TRB
TP2242
C2243 HA 47/25
C2241 1/25 CKSYB105K25-T
IC2241 TND307TD-TBB
TP2243
R2247 2.2
R2243 2.2
D2242 CRH01-TLB
D2243 CRH01-TLB
TP2296
Q2242 QSZ2-TRB
Q2243 QSZ2-TRB
TP2244
VC_SO-
TP2295
IC2242 PS9117-TLB
SUS-B
R2244 360
VC15V2
UDZS8R2(B)-TRB D2290
R2299 10K
Q2291 DTC143EK-TLB
Q2290 DTC123TKA-TLB
C2299 YB 0.1/25
TP2294
IC2251 TC7SH04FUS1-TLB
C2252 YB 1.0/10
TP2293
R2253 100
R2251 3.3K
D2251 UDZS8R2(B)-TRB
C2256 HA 47/25
C2253 1/25 CKSYB105K25-T
IC2252 TND307TD-TBB
TP2251
Q2251 QSZ2-TRB
TP2252
SUS-G
R2252 100
R2279 10K
C2251 CH 330P
VC15V
L2351 BTH1134- -T 10
VC15V1
TP2351
TP2352
R2351 ACN7162- -T
R2352 6.8K 1/2W
R2353 10K
C2351 HA 47/16
TP2353
Q2351 HN1B04FU (YGR)-TRB
R2354 47K
R2355 15K
R2357 10K
R2358 22K
R2359 22K
TP2354
TP2355
C2352 HA 47/25
C2353 HA 47/16
R2356 6.8K
C2354 YB 1/16
TP2361 TP2360
TP2362
Q2352 2SC4081 (QRS)-TLB
YDRV_PD
GNDDIG
from POWER SUPPLY Ass'y
Y4
TP2357 TP2359 VCSUS
TP2356 TP2358
VSUS
VSUS
NC
GND_SUS
GND_SUS
GND_D
+6_5V
+16_5V
NC
CN2351 B8B-EH
C2355 YB 0.1/16
L2356 ATH1186- -T 1.0
L2355 ATH1186- -T 1.0
L2352 ATH1186- -T 1.0
F2351 CTF1449- -T
VCSUSL
from POWER SUPPLY Ass'y
TP2364 TP2365 TP2366 TP2367 TP2368 TP2369 TP2370 TP2371
K2351 AKX1061- -T
SUSGND
TP2312 TP2313
C2301 ACH1445- 470/250
C2305 ACH1445- 470/250
C2302 3.3/250 ACE1180-
C2306 3.3/250 ACE1180-
C2303 3.3/250 ACE1180-
C2307 3.3/250 ACE1180-
C2304 3.3/250 ACE1180-
C2308 3.3/250 ACE1180-
to ADRRESS Ass'y
TP2363
R2360 0
L2353 BTH1134- -T
GNDDIG
GNDSUS
GND_D 12V GND_ADR NC +60V +60V
Y5
CN2353 AKM1277- -TBB
TP2398 TP2397 TP2396
V+8V
VCADR
Y6
TP2399
1SS355-TRB D2380
PQ09DZ11-TLB IC2380
VIN VO VC GND NC
C2367 HA 100/25
C2368 HA 100/25
C2356 ACH1448- -F
C2357 ACH1448- -F 470/80
VCC5V
TP2378
1SS355-TRB D2351
IC2351
PQ05DZ11-TLB
C2380 YB 0.1/16
C2381 YB 0.1/16
L2354 BTH1134- -T 10
TP2376
R2361 10K
PSW2
TP2377
C2358 HA 100/10
C2359 YB 0.1/16
C2360 YB 0.047/16
C2361 HA 47/16
C2362 YB 1.0/10
C2369 HA 47/16
C2363 HA 47/16
C2364 YB 0.1/16
TP2379
C2365 YB 0.1/16
C2366 YB 0.1/16
GNDADR
GND_D 5V 8V GND_ADR +60V +60V GND_ADR 8V 5V GND_D
CN2354 AKM1281- -TBB
GND_D 5V 8V GND_ADR +60V
CN2355 AKM1276- -TBB
Y7 Y8
CN2356 AKM1281- -TBB
KN2202 ANK1841- -TFB
KN2203
KN2204 ANK1841- -TFB
KN2205
KN2206 ANK1841- -TFB
ANK1841- -TFB
ANK1841- -TFB
A
B
C
D
E
F

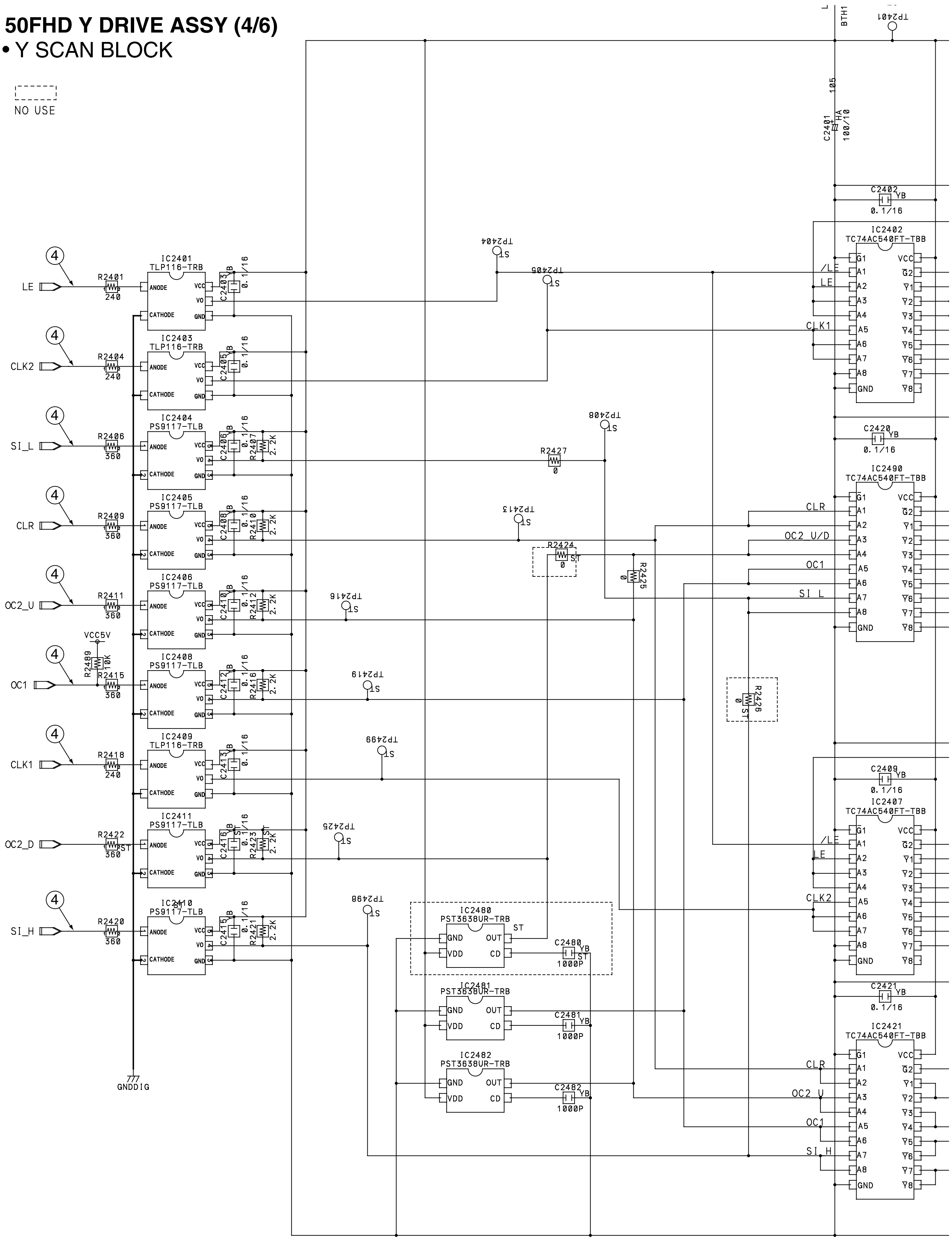
USED	VACANT
C 2201-2381	2202-2210, 2213-2220, 2224-2230, 2234-2240, 2244-2250, 2254-2255, 2257-2270, 2275-2280, 2287-2289, 2293-2298, 2300, 2311-2350, 2370-2379,
CN 2201-2357	2202-2280, 2282-2350, 2352,
D 2208-2380	2209-2220, 2224-2230, 2234-2240, 2244-2250, 2252-2270, 2274-2280, 2285-2288, 2291-2350, 2352-2379,
F 2301-2351	2331-2350,
IC 2202-2380	2204-2210, 2212-2220, 2223-2230, 2233-2240, 2243-2250, 2253-2270, 2272-2300, 2303-2350, 2352-2379,
K 2301-2351	2302-2350,
KN 2202-2307	2209-2300,
L 2351-2356	
Q 2211-2352	2212-2220, 2223-2230, 2233-2238, 2244-2250, 2252-2270, 2272-2280, 2284-2289, 2292-2350,
R 2201-2361	2204-2205, 2209-2210, 2216-2217, 2219-2220, 2229-2230, 2239-2240, 2248-2250, 2254-2262, 2270, 2280, 2296-2298, 2300, 2307-2310, 2313-2350,
TP 2201-2399	2202-2203, 2208-2210, 2214-2220, 2226-2230, 2236-2240, 2245-2250, 2253-2270, 2274-2280, 2287-2292, 2299-2300, 2314-2350, 2372-2375, 2380-2392, 2395,


VC_SO+
Q2221 QSZ2-TRB
IC2222 TND307TD-TBB
R2222 220
R2223 10K
C2223
C2221 47/25 HA
CKSYB105K25-T 1/25
D2221 UDZS5R6(B)-TRB
R2225 100
TP2222 ST
TP2223 ST
TP2224 ST
R2226 2.2
D2222 CRH01-TLB
D2223 CRH01-TLB
R2227 18
R2228 0
TP2298 ST
TP2225 ST
VC_SO-
VC_PS+
Q2232 QSZ2-TRB
IC2231 TND307TD-TBB
C2231 47/25 HA
CKSYB105K25-T 1/25
TP2232
TP2233 ST
R2234 2.2
D2233 CRH01-TLB
D2232 CRH01-TLB
R2235 18
R2238 0
TP2297 ST
TP2235 ST
VC_PS-
VDD
IN A
GND
IN B
OUT A
OUT B
NC
Q2243 QSZ2-TRB
TP2301 ST
TP2295 ST
IC2301 AXF1161-
SUSOUT
MSK-R
PSUS
SUSGND
GND
SUS-G
VSUS
MSK-F
SUS-B
MSK-S
SUBGND
R2301 10 1/10W
R2307 10 1/10W
R2302 0 1/10W
R2305 3.3 1/2W ACN1168- -T
R2306 3.3 1/2W ACN1168- -T ST
IC2302 AXF1161-
R2303 10 1/10W
R2308 10 1/10W
R2304 0 1/10W
R2311 3.3 1/2W ACN1168- -T
R2312 3.3 1/2W ACN1168- -T ST
3.3/250 ACE1180-
Y8
Y9
CN2356 AKM1281- -TBB
CN2357 AKM1276- -TBB
GND_ADR
+60V
8V
5V
GND_D
KN2205
KN2206
KN2207
KN2208
ANK1841- -TFB
K2301 AKX1061- -T
SUSGND
⑦
⑤
⑥
KN2301 ANK1841- -TFB
KN2302 ANK1841- -TFB
KN2303 ANK1841- -TFB
KN2304 ANK1841- -TFB
KN2305 ANK1841- -TFB
KN2306 ANK1841- -TFB
KN2307 ANK1841- -TFB
F2301–F2320 ATX1062-
F2321–F2330 ATX1062-
PSUSP
PSUS
TP2302
TP2303
TP2304
TP2305
TP2306
TP2307
TP2308
TP2309
TP2310
TP2311
ST
C2309 CH
C2310 CH
GNDSUS
D2284 D1FK60-TRB
TP2393 ST
R2278 5.6 3W
R2287 5.6 3W
R2288
R2289
R2290
R2291
R2292
R2293
TP2272 ST
TP2286 ST
TP2394 ST
①
R2294 22 1/2W ACN1178- -T ST
C2285 CH ST
VCC5V
VC15V2
C2271 47/25 HA 105
C2272 0.1/50 YF
R2203 10K
R2278 10K
IC2271 TND301S-TBB
YNRST
YNOFS
R2271 10
R2281 10
R2272 10
R2282 10
D2271 1SS301-TLB
D2281 CRH01-TLB
D2282 CRH01-TLB
TP2271 ST
TP2281 ST
GNDDIG
C2273 HA 2.2/250 105
C2274 0.33/100 ACG1118- -T ST
C2281 HA 2.2/250 105
C2282 0.33/100 ACG1118- -T ST
C2283 0.33/100 ACG1118- -T ST
R2273 2.2K
D2272 UDZS16(B)-TRB
R2285 22K
D2289 UDZS9R1(B)-TRB
D2283 UDZS9R1(B)-TRB
TP2285 ST
R2295 0 1/10W ST
D2273 1SS355-TRB ST
R2277 10 ST
R2276 10
TP2273 ST
Q2271 2SK3050-TLB
R2283 10
R2284 10
R2286 10
TP2282 ST
TP2283 ST
TP2284 ST
Q2281 2SK3399-TLB
Q2282 2SK3399-TLB
Q2283 2SK3399-TLB
D
G
S
C2284 1.5/300 ACE1163- -F
C2286 1.5/300 ACE1163- -F
VCNOFS
CN2281 B3B-EH ST
NC
SUSGND

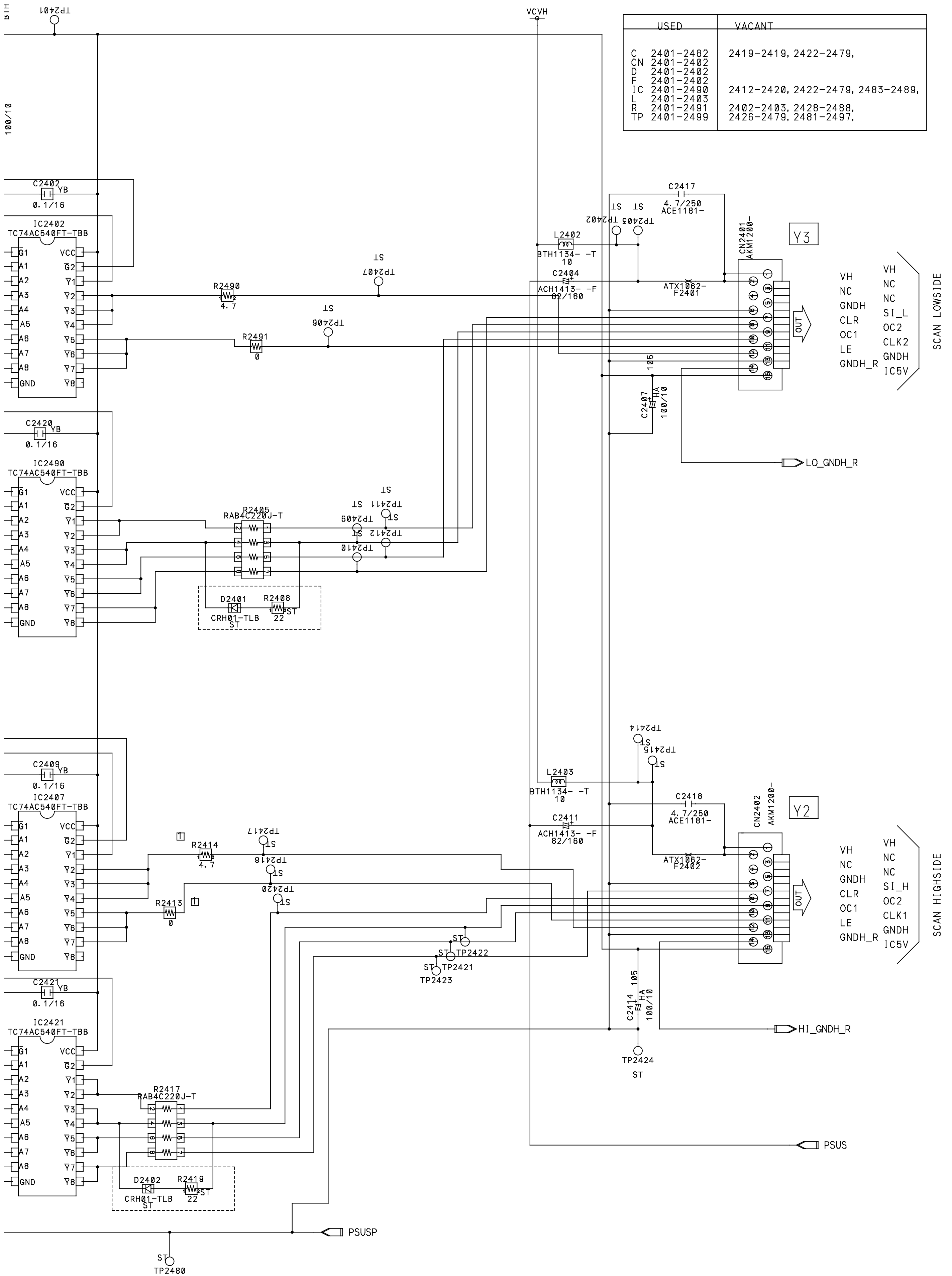
1.17 50FHD Y DRIVE ASSY (4/6)

50FHD Y DRIVE ASSY (4/6)

• Y SCAN BLOCK



NO USE
LE
CLK2
SI_L
CLR
OC2_U
OC1
CLK1
OC2_D
SI_H
R2401 240
R2404 240
R2406 360
R2409 360
R2411 360
R2489 10K
VCC5V
R2415 360
R2418 240
R2422 360 ST
R2420 360
IC2401 TLP116-TRB
IC2403 TLP116-TRB
IC2404 PS9117-TLB
IC2405 PS9117-TLB
IC2406 PS9117-TLB
IC2408 PS9117-TLB
IC2409 TLP116-TRB
IC2411 PS9117-TLB
IC2410 PS9117-TLB
ANODE
CATHODE
VCC
VO
GND
C2403 B 0.1/16
C2405 B 0.1/16
C2406 B 0.1/16
R2407 2.2K
C2408 B 0.1/16
R2410 2.2K
C2410 B 0.1/16
R2412 2.2K
C2412 B 0.1/16
R2416 2.2K
C2413 B 0.1/16
C2416 B ST 0.1/16
R2423 ST 2.2K
C2415 B 0.1/16
R2421 2.2K
GNDDIG
TP2404 ST
TP2405 ST
TP2408 ST
TP2413 ST
TP2416 ST
TP2419 ST
TP2499 ST
TP2425 ST
TP2498 ST
TP2401
R2427 0
R2424 ST 0
R2425 0
R2426 ST 0
IC2480 PST3638UR-TRB ST
IC2481 PST3638UR-TRB
IC2482 PST3638UR-TRB
GND OUT
VDD CD
C2480 YB ST 1000P
C2481 YB 1000P
C2482 YB 1000P
BTH1
105
C2401 HA 100/10
C2402 YB 0.1/16
IC2402 TC74AC540FT-TBB
C2420 YB 0.1/16
IC2490 TC74AC540FT-TBB
C2409 YB 0.1/16
IC2407 TC74AC540FT-TBB
C2421 YB 0.1/16
IC2421 TC74AC540FT-TBB
G1 A1 A2 A3 A4 A5 A6 A7 A8 GND
VCC G2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
/LE
LE
CLK1
CLR
OC2 U/D
OC1
SI L
CLK2
OC2 U
SI H

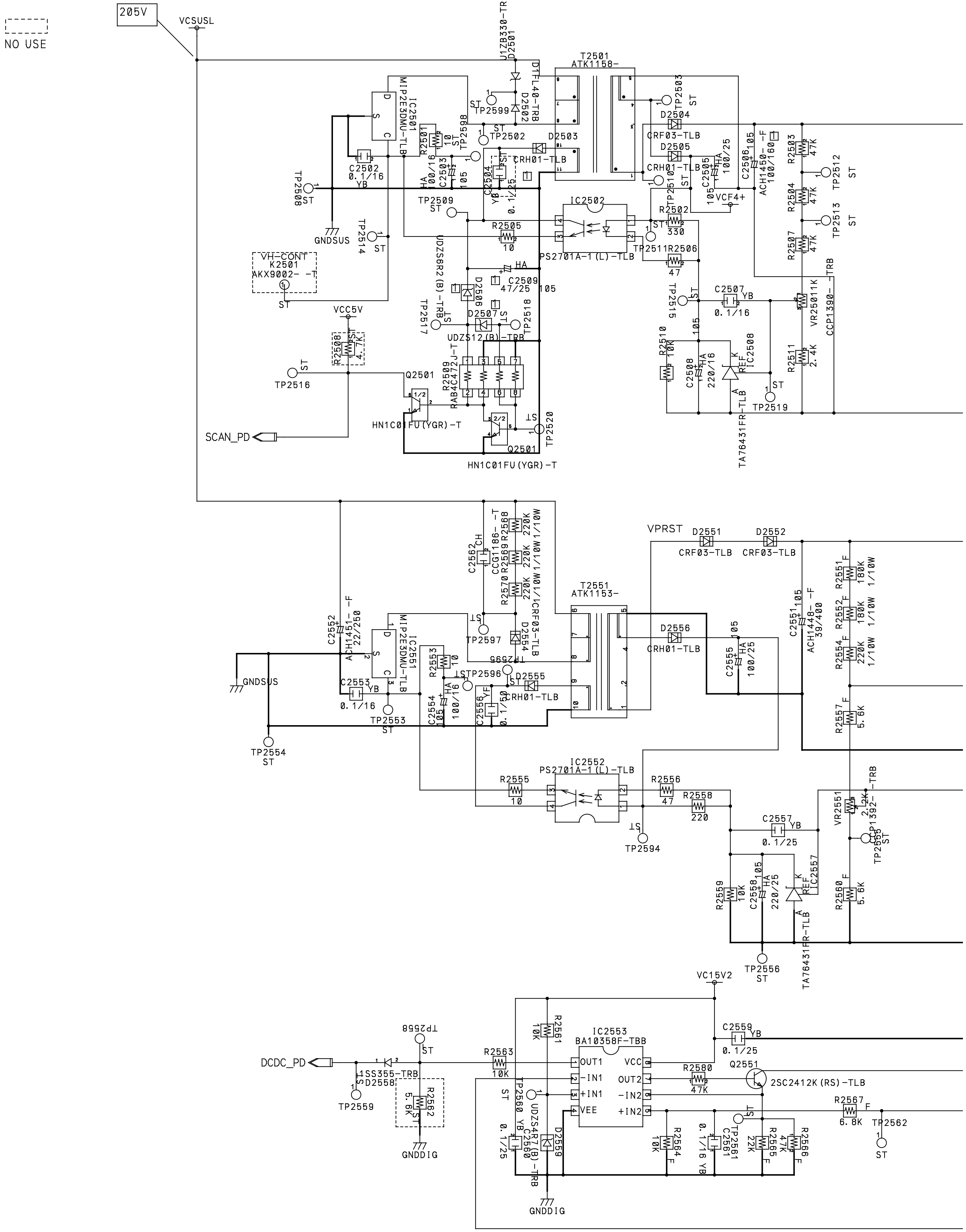

TP2401
VCVH
100/10
C2402
YB
0.1/16
IC2402
TC74AC540FT-TBB
G1
A1
A2
A3
A4
A5
A6
A7
A8
GND
VCC
G2
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
R2490
4.7
TP2407
ST
R2491
0
TP2406
C2420
IC2490
R2405
RAB4C220J-T
TP2409
TP2410
TP2411
TP2412
D2401
CRH01-TLB
R2408
22
C2417
4.7/250
ACE1181-
TP2402
TP2403
L2402
BTH1134- -T
10
C2404
ACH1413- -F
82/160
ATX1062-
F2401
CN2401
AKM1200-
Y3
OUT
105
C2407
HA
100/10
VH
NC
GNDH
CLR
OC1
LE
GNDH_R
VH
NC
NC
SI_L
OC2
CLK2
GNDH
IC5V
SCAN LOWSIDE
LO_GNDH_R
C2409
IC2407
R2414
4.7
R2413
0
TP2417
TP2418
TP2420
TP2414
TP2415
L2403
BTH1134- -T
10
C2418
4.7/250
ACE1181-
C2411
ACH1413- -F
82/160
ATX1062-
F2402
CN2402
AKM1200-
Y2
SI_H
CLK1
SCAN HIGHSIDE
TP2422
TP2421
TP2423
C2414
105
HA
100/10
TP2424
HI_GNDH_R
C2421
IC2421
R2417
RAB4C220J-T
D2402
CRH01-TLB
R2419
22
PSUS
PSUSP
TP2480
5
6
7
8
A
B
C
D
E
F

USED	VACANT
C 2401-2482	2419-2419, 2422-2479,
CN 2401-2402	
D 2401-2402	
F 2401-2402	
IC 2401-2490	2412-2420, 2422-2479, 2483-2489,
L 2401-2403	
R 2401-2491	2402-2403, 2428-2488,
TP 2401-2499	2426-2479, 2481-2497,

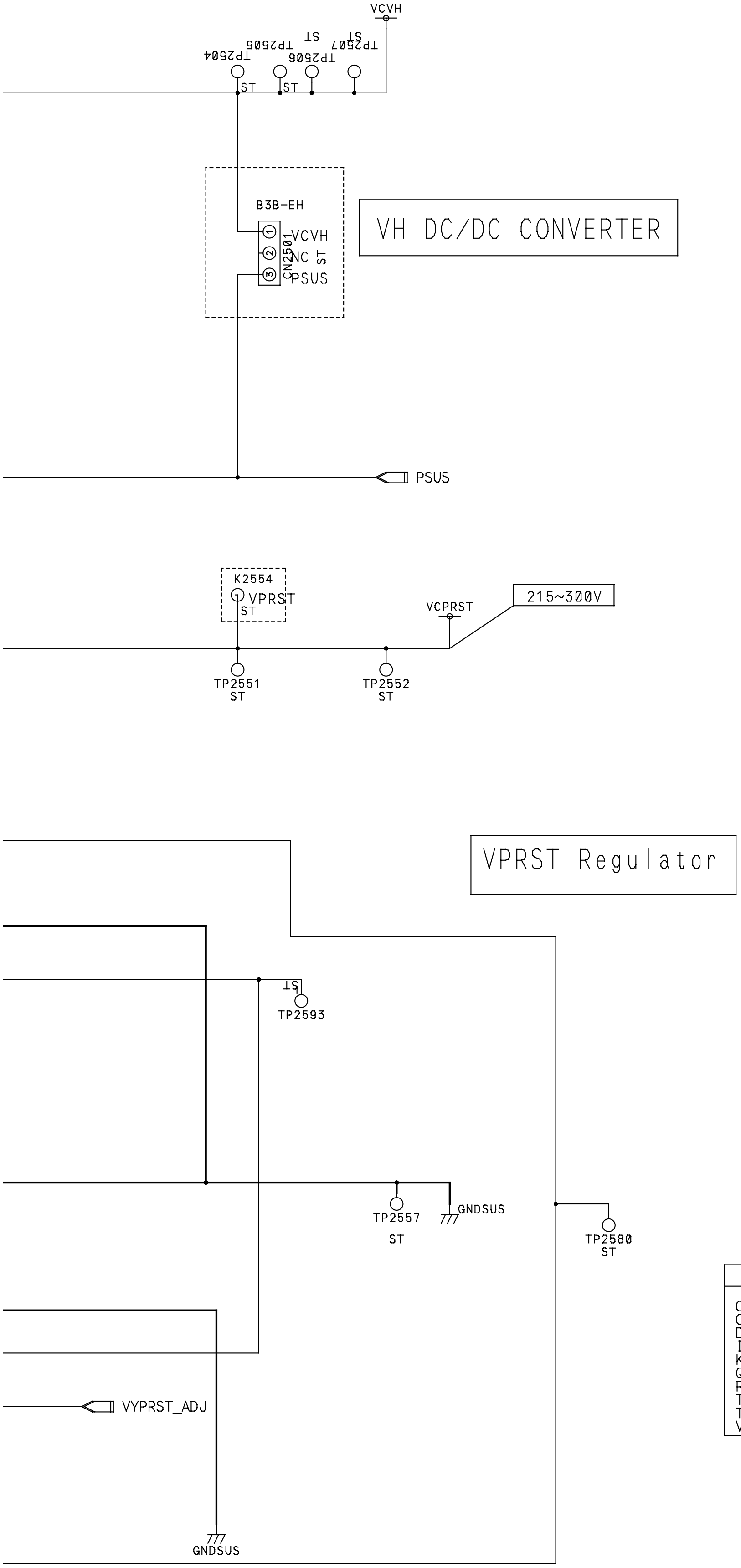
1.18 50FHD Y DRIVE ASSY (5/6)

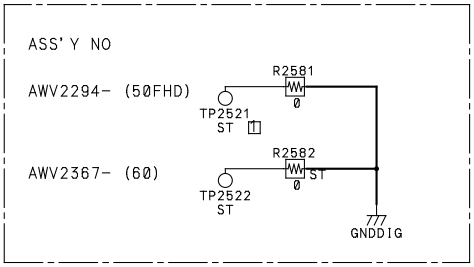
50FHD Y DRIVE ASSY (5/6)

• Y VH D-D CON BLOCK



NO USE
205V
VCSUSL
UJZB330-TRB
D2501
DTFL40-TRB
D2502
T2501
ATK1158-
MIP2E3DMU-TLB
IC2501
TP2599
TP2598
TP2502
D2503
CRH01-TLB
R2501 10
C2502 0.1/16 YB
C2503 100/16 HA 105
C2504 0.1/25 YB
TP2508
TP2509
GNDSUS
TP2514
VH-CONT
K2501
AKX9002- -T
IC2502
PS2701A-1(L)-TLB
R2505 10
UDZS6R2(B)-TRB
D2506
C2509 47/25 HA 105
D2507
UDZS12(B)-TRB
TP2517
TP2518
VCC5V
R2508 4.7K
TP2516
Q2501
RAB4C472J-T
R2509
HN1C01FU(YGR)-T
SCAN_PD
TP2520
TP2503
D2504
CRF03-TLB
D2505
CRH01-TLB
TP2510
C2505 100/25 HA 105
VCF4+
C2506 ACH1450- -F 100/160 105
R2502 330
TP2511
R2506 47
R2503 47K
R2504 47K
R2507 47K
TP2512
TP2513
TP2515
C2507 0.1/16 YB
VR2501 1K
CCP1390- -TRB
R2510 10K
C2508 220/16 HA 105
IC2508
TA76431FR-TLB
R2511 2.4K
TP2519
C2562 CH
CCG1186- -T
R2568 220K 1/10W
R2569 220K 1/10W
R2570 220K 1/10W
D2554
CRF03-TLB
TP2597
TP2595
IC2551
MIP2E3DMU-TLB
C2552 ACH1451- -F 22/250
R2553 10
C2553 0.1/16 YB
TP2553
TP2596
D2555
CRH01-TLB
C2554 100/16 HA 105
C2556 0.1/50 YF
GNDSUS
TP2554
T2551
ATK1153-
VPRST
D2551
CRF03-TLB
D2552
CRF03-TLB
D2556
CRH01-TLB
C2555 100/25 HA 105
C2551 ACH1448- -F 39/400 105
R2551 180K 1/10W F
R2552 180K 1/10W F
R2554 220K 1/10W F
R2557 5.6K F
IC2552
PS2701A-1(L)-TLB
R2555 10
R2556 47
R2558 220
TP2594
C2557 0.1/25 YB
VR2551 2.2K
CCP1392- -TRB
TP2555
R2559 10K
C2558 220/25 HA 105
IC2557
TA76431FR-TLB
R2560 5.6K F
TP2556
VC15V2
TP2558
DCDC_PD
1SS355-TRB
D2558
TP2559
R2562 5.6K
GNDDIG
R2561 10K
R2563 10K
IC2553
BA10358F-TBB
OUT1
-IN1
+IN1
VEE
VCC
OUT2
-IN2
+IN2
TP2560
C2560 0.1/25 YB
UDZS4R7(B)-TRB
D2559
GNDDIG
R2564 10K F
C2561 0.1/16 YB
TP2561
C2559 0.1/25 YB
R2580 47K
Q2551
2SC2412K(RS)-TLB
R2565 22K F
R2566 47K
R2567 6.8K F
TP2562


VCVH
TP2504
TP2505
TP2506
TP2507
ST
B3B-EH
CN2501
VCVH
NC
PSUS
VH DC/DC CONVERTER
PSUS
K2554
VPRST
VCPRST
215~300V
TP2551
TP2552
VPRST Regulator
TP2593
TP2557
GNDSUS
TP2580
VYPRST_ADJ
GNDSUS

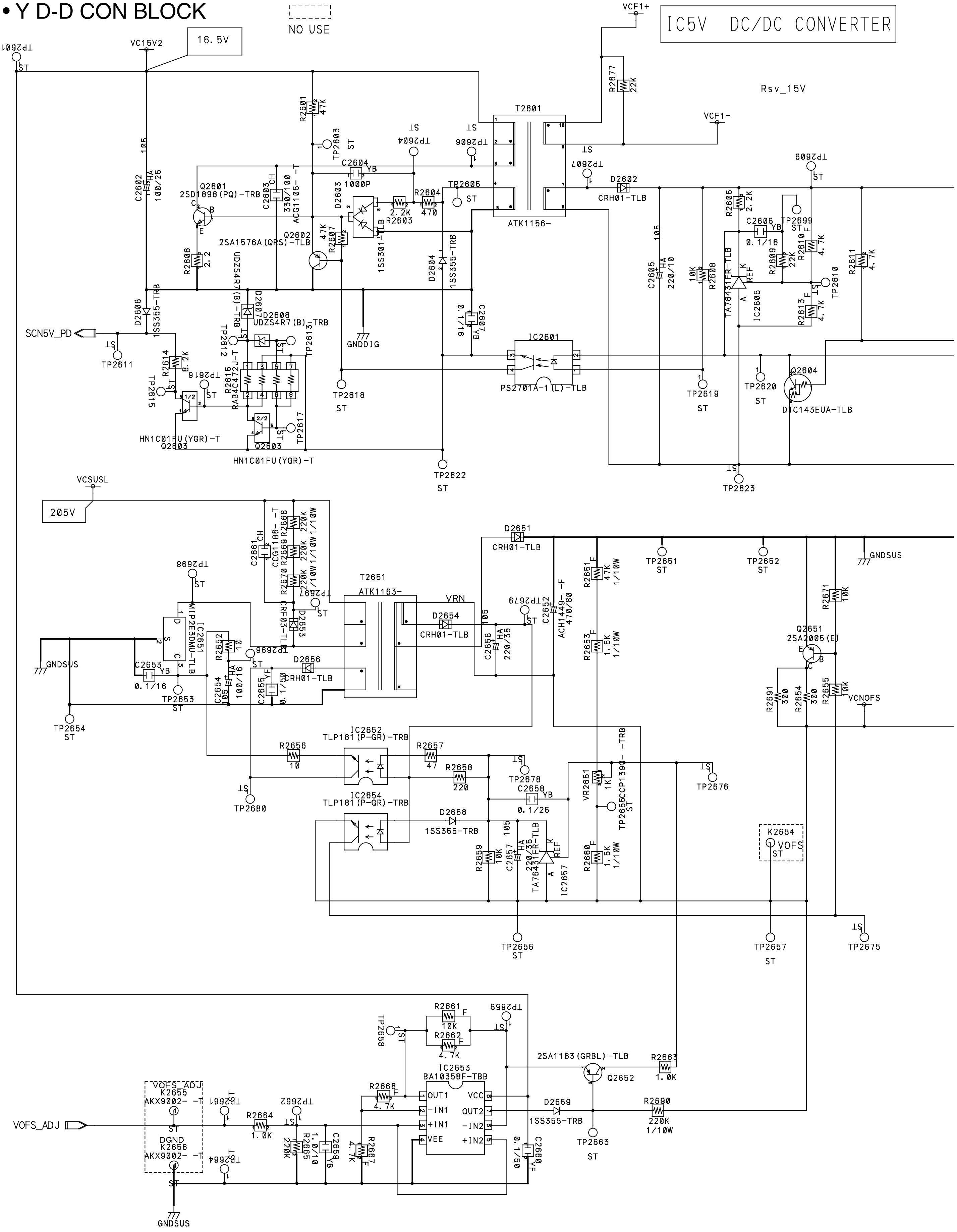

ASS'Y NO
AWV2294- (50FHD)
AWV2367- (60)
R2581
R2582
0
TP2521
TP2522
ST
GNDDIG

USED	VACANT
C 2502-2562	2510-2550,
CN 2501-2501	
D 2501-2559	2508-2550, 2553, 2557,
IC 2501-2557	2503-2507, 2509-2550, 2554-2556,
K 2501-2554	2502-2553,
Q 2501-2551	2502-2550,
R 2501-2582	2512-2550, 2571-2579,
T 2501-2551	2502-2550,
TP 2502-2599	2523-2550, 2563-2579, 2581-2592,
VR 2501-2551	2502-2550,

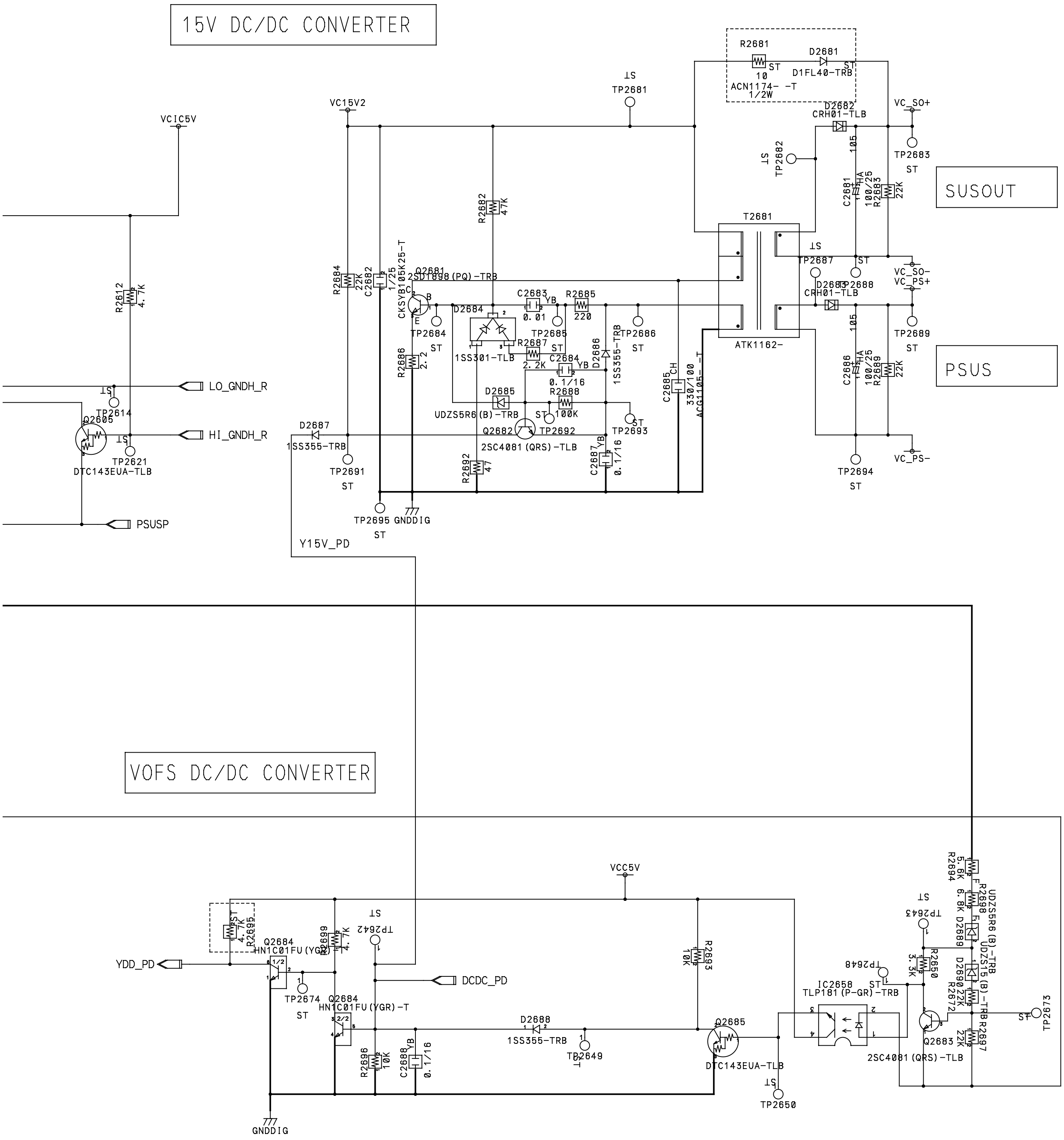
1.19 50FHD Y DRIVE ASSY (6/6)

50FHD Y DRIVE ASSY (6/6)

- Y D-D CON BLOCK



NO USE
IC5V DC/DC CONVERTER
TP2601
VC15V2
16.5V
VCF1+
R2677 22K
Rsv_15V
VCF1-
T2601
ATK1156-
R2601 47K
TP2603 ST
TP2604 ST
TP2606 ST
TP2607 ST
TP2609 ST
C2604 YB 1000P
C2602 HA 100/25
Q2601 2SD1898(PQ)-TRB
C2603 CH 330/100 ACG1105-
D2603
R2604 470
R2603 2.2K
TP2605 ST
D2602 CRH01-TLB
R2605 2.2K
C2606 YB 0.1/16
TP2699 ST
R2610 4.7K
R2611 4.7K
TP2610 ST
Q2602 2SA1576A(QRS)-TLB
R2607 47K
1SS301-TLB
D2604 1SS355-TRB
R2606 2.2
UDZS4R7(B)-TRB
C2605 HA 220/10
R2608 10K
TA76431FR-TLB
IC2605
R2609 22K
R2613 4.7K
D2606 1SS355-TRB
D2607
D2608 UDZS4R7(B)-TRB
TP2613 ST
GNDDIG
C2607 YB 0.1/16
SCN5V_PD
TP2611 ST
R2614 8.2K
TP2612 ST
TP2616 ST
TP2615 ST
R2615 RAB4C472J-T
IC2601 PS2701A-1(L)-TLB
TP2618 ST
TP2619 ST
TP2620 ST
Q2604 DTC143EUA-TLB
HN1C01FU(YGR)-T Q2602
TP2617 ST
Q2603 HN1C01FU(YGR)-T
TP2622 ST
TP2623 ST
VCSUSL
205V
C2661 CH
CCG1186-T
R2668 220K 1/10W
R2669 220K 1/10W
R2670 220K 1/10W
TP2698 ST
T2651 ATK1163-
TP2697 ST
D2653 CRF03-TL
VRN
D2654 CRH01-TLB
D2651 CRH01-TLB
TP2651 ST
TP2652 ST
GNDSUS
R2651 47K 1/10W
TP2679 ST
C2652 ACH1449-F 470/80
R2671 10K
IC2651 MIP2E3DMU-TLB
R2652 10
TP2696 ST
D2656 CRH01-TLB
C2656 HA 220/35
R2653 1.5K 1/10W
Q2651 2SA2005(E)
C2653 YB 0.1/16
C2654 HA 100/16
C2655 YF 0.1/50
TP2653 ST
R2691 300
R2654 300
R2655 10K
VCNOFS
TP2654 ST
IC2652 TLP181(P-GR)-TRB
R2656 10
R2657 47
R2658 220
TP2678 ST
C2658 YB 0.1/25
VR2651 1K CCP1390-TRB
TP2655 ST
TP2676 ST
TP2680 ST
IC2654 TLP181(P-GR)-TRB
D2658 1SS355-TRB
R2659 10K
C2657 HA 220/35
TA76431FR-TLB IC2657
R2660 1.5K 1/10W
K2654 VOFS ST
TP2656 ST
TP2657 ST
TP2675 ST
R2661 10K
R2662 4.7K
TP2658 ST
TP2659 ST
2SA1163(GRBL)-TLB
Q2652
R2663 1.0K
IC2653 BA10358F-TBB
OUT1 VCC -IN1 OUT2 +IN1 -IN2 VEE +IN2
R2666 4.7K
D2659 1SS355-TRB
R2690 220K 1/10W
VOFS_ADJ K2655 AKX9002-T
TP2661 ST
TP2662 ST
R2664 1.0K
R2665 220K
C2659 YB 1.0/10
R2667 4.7K
C2660 YF 0.1/50
TP2663 ST
VOFS_ADJ
DGND K2656 AKX9002-T
TP2664 ST
GNDSUS

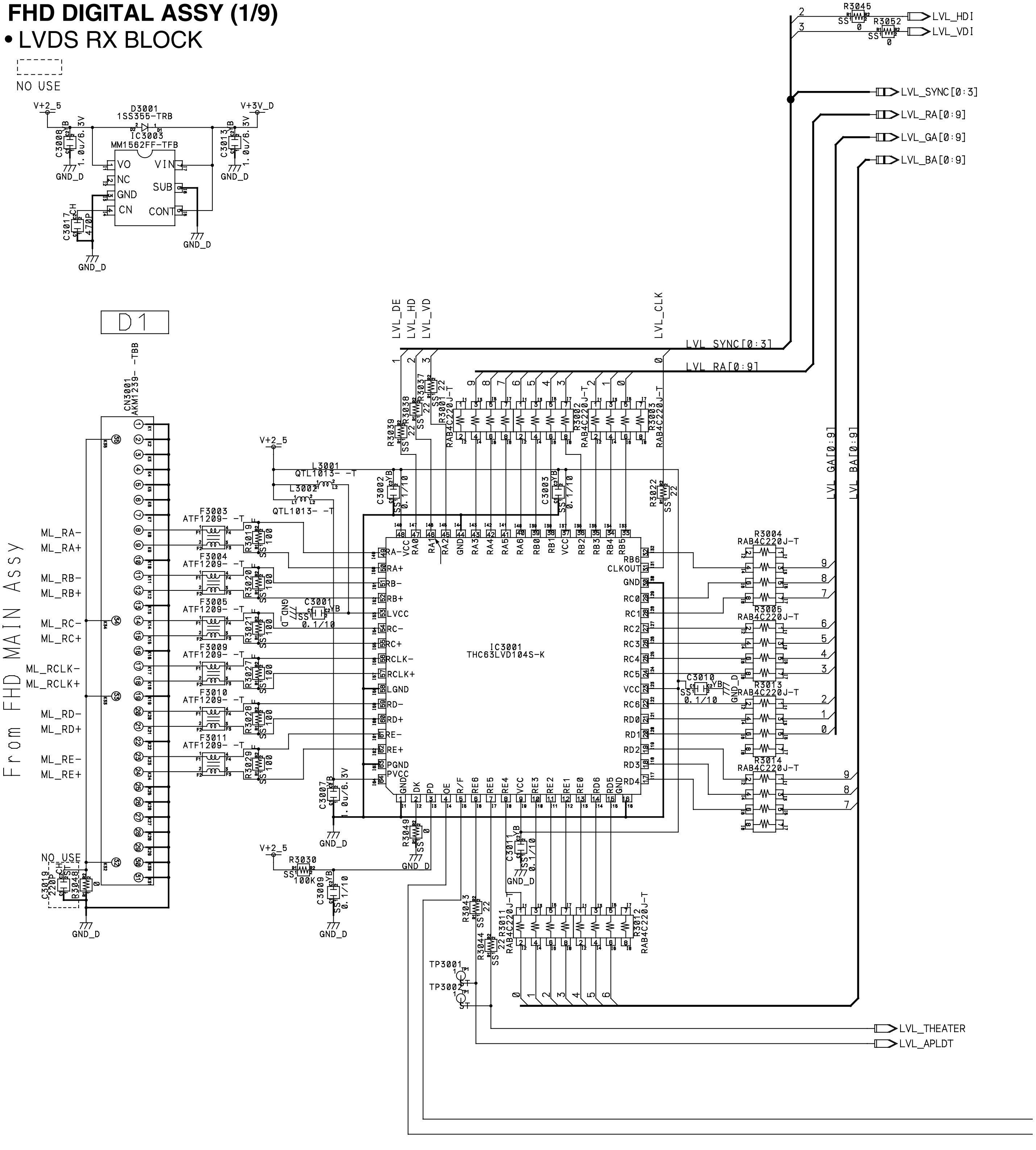

15V DC/DC CONVERTER
VCIC5V
VC15V2
R2612
4.7K
LO_GNDH_R
HI_GNDH_R
PSUSP
TP2614
ST
Q2605
TP2621
DTC143EUA-TLB
R2684
22K
C2682
1/25
CKSYB105K25-T
Q2681
2SD1898(PQ)-TRB
TP2684
ST
R2686
2.2
R2682
47K
TP2681
ST
D2684
1SS301-TLB
C2683
0.01
YB
R2685
220
TP2685
ST
R2687
2.2K
C2684
0.1/16
YB
D2686
1SS355-TRB
TP2686
ST
D2685
UDZS5R6(B)-TRB
R2688
100K
Q2682
2SC4081(QRS)-TLB
TP2692
TP2693
ST
C2687
0.1/16
YB
R2692
47
D2687
1SS355-TRB
TP2691
ST
TP2695
ST
GNDDIG
Y15V_PD
C2685
CH
330/100
ACG1105- -T
R2681
10
ST
ACN1174- -T
1/2W
D2681
D1FL40-TRB
ST
D2682
CRH01-TLB
TP2682
ST
T2681
ATK1162-
C2681
HA
100/25
105
R2683
22K
VC_SO+
TP2683
ST
SUSOUT
TP2687
ST
TP2688
ST
VC_SO-
VC_PS+
D2683
CRH01-TLB
C2686
HA
100/25
105
R2689
22K
TP2689
ST
PSUS
TP2694
ST
VC_PS-
VOFS DC/DC CONVERTER
VCC5V
R2695
4.7K
ST
YDD_PD
Q2684
HN1C01FU(YGR)
R2699
4.7K
TP2642
ST
TP2674
ST
Q2684
HN1C01FU(YGR)-T
DCDC_PD
R2696
10K
C2688
0.1/16
YB
D2688
1SS355-TRB
TP2649
R2693
10K
Q2685
DTC143EUA-TLB
TP2650
ST
IC2658
TLP181(P-GR)-TRB
TP2648
ST
TP2643
ST
R2650
3.3K
Q2683
2SC4081(QRS)-TLB
R2694
5.6K
F
R2698
6.8K
F
D2689
UDZS5R6(B)-TRB
D2690
UDZS15(B)-TRB
R2672
22K
R2697
22K
TP2673
ST
GNDDIG

USED	VACANT
C 2602-2688	2608-2651, 2662-2680,
D 2602-2690	2601, 2605, 2609-2650, 2652, 2655, 2657, 2660-2680,
IC 2601-2658	2602-2604, 2606-2650, 2655-2656,
K 2604-2656	
Q 2601-2686	2606-2650, 2653-2680,
R 2601-2699	2602, 2616-2649, 2673-2676, 2678-2680,
T 2601-2681	2602-2650, 2652-2680,
TP 2601-2699	2602, 2608, 2624-2641, 2644-2647, 2660, 2665-2672, 2677, 2690,
VR 2601-2651	

1.20 FHD DIGITAL ASSY (1/9)

FHD DIGITAL ASSY (1/9)

• LVDS RX BLOCK

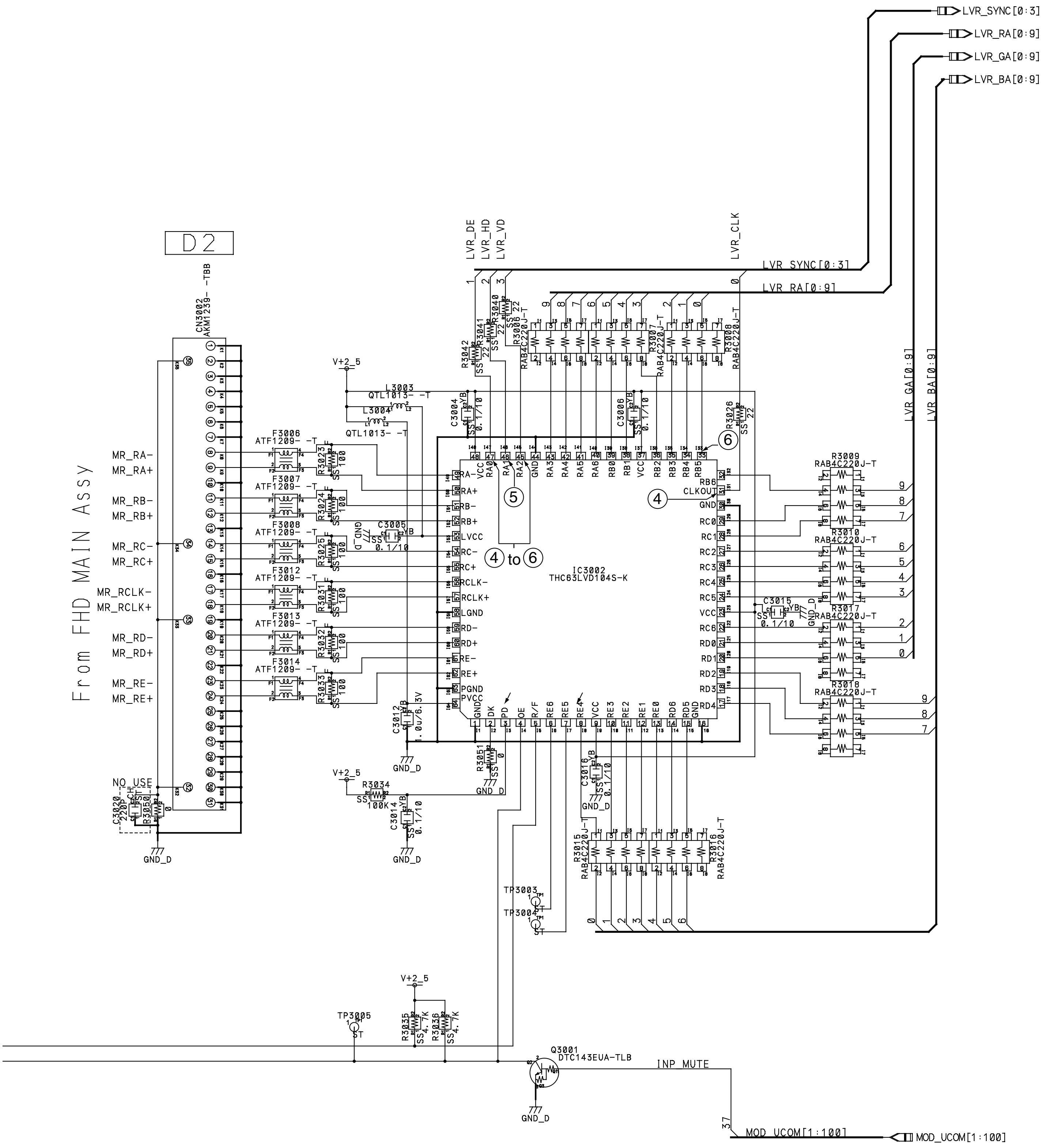


NO USE
V+2_5
D3001
1SS355-TRB
V+3V_D
IC3003
MM1562FF-TFB
C3008
1.0u/6.3V
C3013
1.0u/6.3V
VO
NC
GND
CN
VIN
SUB
CONT
C3017
470P
GND_D
D1
CN3001
AKM1239- -TBB
From FHD MAIN Assy
ML_RA-
ML_RA+
ML_RB-
ML_RB+
ML_RC-
ML_RC+
ML_RCLK-
ML_RCLK+
ML_RD-
ML_RD+
ML_RE-
ML_RE+
NO USE
C3019
220P
R3048
0
F3003
ATF1209- -T
F3004
ATF1209- -T
F3005
ATF1209- -T
F3009
ATF1209- -T
F3010
ATF1209- -T
F3011
ATF1209- -T
R3019
R3020
R3021
R3027
R3028
R3029
100
L3001
QTL1013- -T
L3002
QTL1013- -T
C3001
0.1/10
C3002
0.1/10
C3003
0.1/10
C3007
1.0u/6.3V
C3009
0.1/10
R3030
100K
C3010
0.1/10
C3011
0.1/10
R3049
0
IC3001
THC63LVD104S-K
RA-
RA+
RB-
RB+
LVCC
RC-
RC+
RCLK-
RCLK+
LGND
RD-
RD+
RE-
RE+
PGND
PVCC
VCC
RA0
RA1
RA2
GND
RA3
RA4
RA5
RA6
RB0
RB1
VCC
RB2
RB3
RB4
RB5
RB6
CLKOUT
GND
RC0
RC1
RC2
RC3
RC4
RC5
VCC
RC6
RD0
RD1
RD2
RD3
RD4
GND
DK
PD
OE
R/F
RE6
RE5
RE4
VCC
RE3
RE2
RE1
RE0
RD6
RD5
GND
LVL_DE
LVL_HD
LVL_VD
LVL_CLK
LVL_SYNC[0:3]
LVL_RA[0:9]
LVL_GA[0:9]
LVL_BA[0:9]
R3037
22
R3038
22
R3039
R3001
RAB4C220J-T
R3002
RAB4C220J-T
R3003
RAB4C220J-T
R3004
RAB4C220J-T
R3005
RAB4C220J-T
R3013
RAB4C220J-T
R3014
RAB4C220J-T
R3011
RAB4C220J-T
R3012
RAB4C220J-T
R3022
22
R3043
22
R3044
22
R3045
0
R3052
0
LVL_HDI
LVL_VDI
TP3001
TP3002
LVL_THEATER
LVL_APLDT

USED	VACANT
C 3001-3020	3018,
CN 3001-3002	
D 3001-3001	
F 3003-3014	
IC 3001-3003	
L 3001-3004	
Q 3001-3001	
R 3001-3052	3046-3047,
TP 3001-3005	

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k:kΩ, M:MΩ.

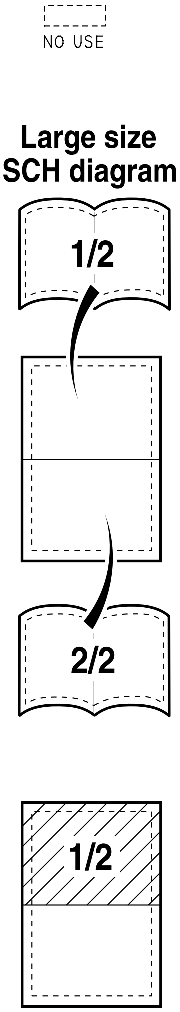
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF
Indication without voltage is 50V
except electrolytic capacitor.

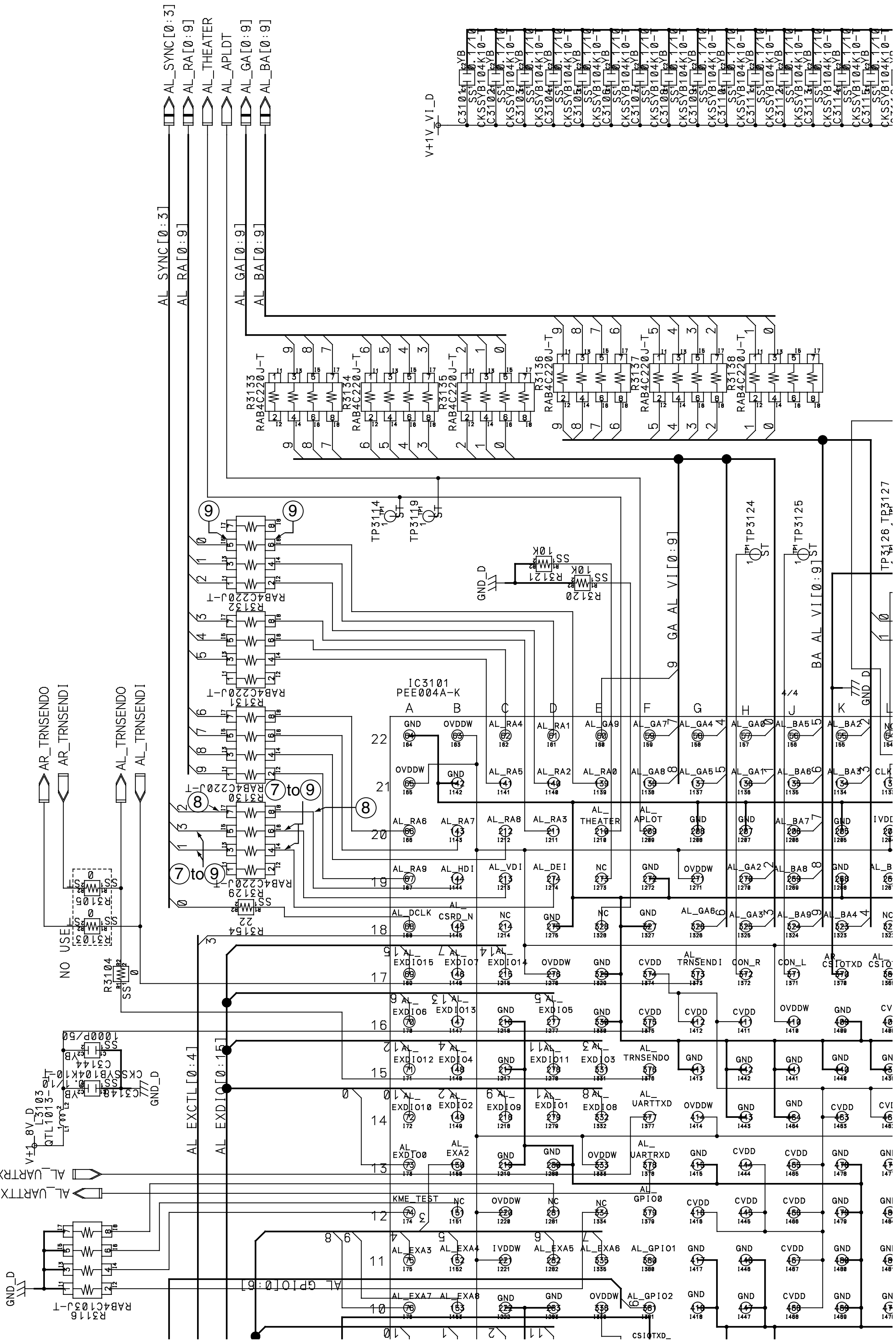

D2
From FHD MAIN Assy
CN3002
AKM1239- -TBB
MR_RA-
MR_RA+
MR_RB-
MR_RB+
MR_RC-
MR_RC+
MR_RCLK-
MR_RCLK+
MR_RD-
MR_RD+
MR_RE-
MR_RE+
NO_USE
C3020
220P CH
R3050
GND_D
F3006
F3007
F3008
F3012
F3013
F3014
ATF1209- -T
R3023
R3024
R3025
R3031
R3032
R3033
SS 100
V+2_5
L3003
QTL1013- -T
L3004
QTL1013- -T
C3004
C3005
C3006
C3012
1.0u/6.3V
C3014
C3015
C3016
0.1/10
R3034
100K
R3051
R3040
R3041
R3042
22
R3006
R3007
R3008
R3009
R3010
R3015
R3016
R3017
R3018
RAB4C220J-T
R3026
IC3002
THC63LVD104S-K
④ to ⑥
④
⑤
⑥
RA-
RA+
RB-
RB+
LVCC
RC-
RC+
RCLK-
RCLK+
LGND
RD-
RD+
RE-
RE+
PGND
PVCC
VCC
RA0
RA1
RA2
GND
RA3
RA4
RA5
RA6
RB0
RB1
RB2
RB3
RB4
RB5
RB6
CLKOUT
RC0
RC1
RC2
RC3
RC4
RC5
RC6
RD0
RD1
RD2
RD3
RD4
GNDC
DK
PD
OE
R/F
RE6
RE5
RE4
RE3
RE2
RE1
RE0
RD6
RD5
LVR_DE
LVR_HD
LVR_VD
LVR_CLK
LVR_SYNC[0:3]
LVR_RA[0:9]
LVR_GA[0:9]
LVR_BA[0:9]
TP3003
TP3004
TP3005
R3035
R3036
SS 4.7K
Q3001
DTC143EUA-TLB
INP MUTE
37
MOD_UCOM[1:100]

1.21 FHD DIGITAL ASSY (2/9)

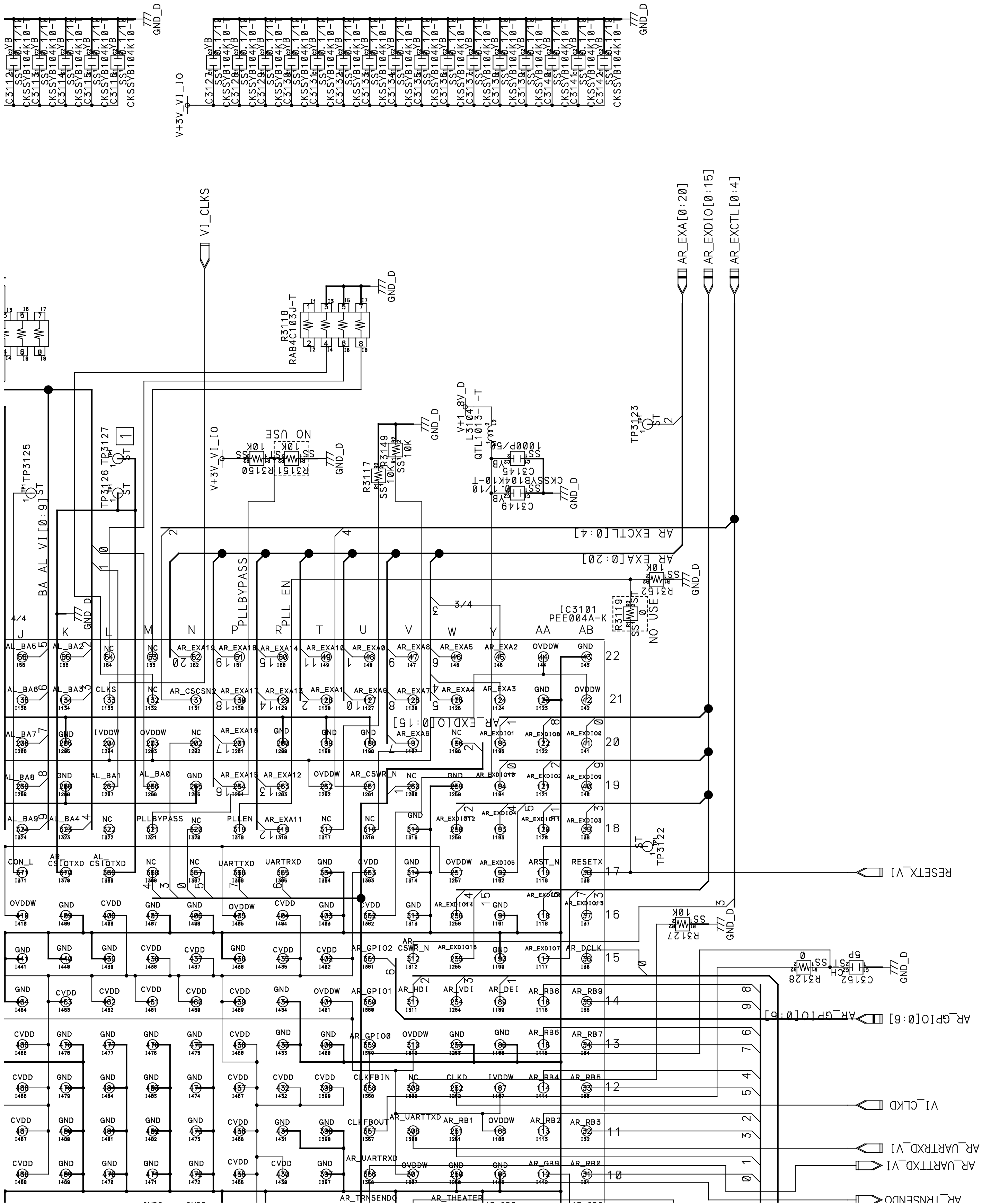
FHD DIGITAL ASSY (2/9)

- ASIC VICTRIA BLOCK (1/2)


NO USE
Large size SCH diagram
1/2
2/2
1/2


AL_SYNC[0:3]
AL_RA[0:9]
AL_THEATER
AL_APLDT
AL_GA[0:9]
AL_BA[0:9]
V+1V_VI_D
C3101
C3102
C3103
C3104
C3105
C3106
C3107
C3108
C3109
C3110
C3111
C3112
C3113
C3114
C3115
CKSSYB104K10-T
0.1/10
SS
R3133
R3134
R3135
R3136
R3137
R3138
RAB4C220J-T
TP3114
TP3119
TP3124
TP3125
TP3126
TP3127
ST
R3121
R3120
10K
SS
GND_D
GA AL VI[0:9]
BA AL VI[0:9]
R3132
R3131
R3130
R3129
RAB4C220J-T
7 to 9
8
9
R3154
22
AR_TRNSENDO
AR_TRNSENDI
AL_TRNSENDO
AL_TRNSENDI
R3105
R3103
NO USE
R3104
0
IC3101
PEE004A-K
A B C D E F G H J K L
22 21 20 19 18 17 16 15 14 13 12 11 10
GND
OVDDW
AL_RA4
AL_RA1
AL_GA9
AL_GA7
AL_GA4
AL_GA0
AL_BA5
AL_BA2
AL_RA5
AL_RA2
AL_RA0
AL_GA8
AL_GA5
AL_GA1
AL_BA6
AL_BA3
AL_RA6
AL_RA7
AL_RA8
AL_RA3
AL_THEATER
AL_APLOT
AL_BA7
IVDD
AL_RA9
AL_HDI
AL_VDI
AL_DEI
NC
AL_GA2
AL_BA8
AL_DCLK
AL_CSRD_N
AL_GA6
AL_GA3
AL_BA9
AL_BA4
EXDIO15
EXDIO7
EXDIO14
CVDD
AL_TRNSENDI
CON_R
CON_L
AR_CSIOTXD
EXDIO6
EXDIO13
EXDIO5
EXDIO12
EXDIO4
EXDIO11
EXDIO3
AL_TRNSENDO
EXDIO10
EXDIO2
EXDIO9
EXDIO1
EXDIO8
AL_UARTTXD
EXDIO0
AL_EXA2
AL_UARTRXD
KME_TEST
AL_GPIO0
AL_EXA3
AL_EXA4
IVDDW
AL_EXA5
AL_EXA6
AL_GPIO1
AL_EXA7
AL_EXA8
AL_GPIO2
CSIOTXD_
AL_EXCTL[0:4]
AL_EXDIO[0:15]
AL_GPIO[0:6]
1000P/50
C3144
C3148
CKSSYB104K10-T
L3103
QTL1013-
V+1.8V_D
GND_D
AL_UARTRXD_VI
AL_UARTTXD_VI
R3116
RAB4C103J-T

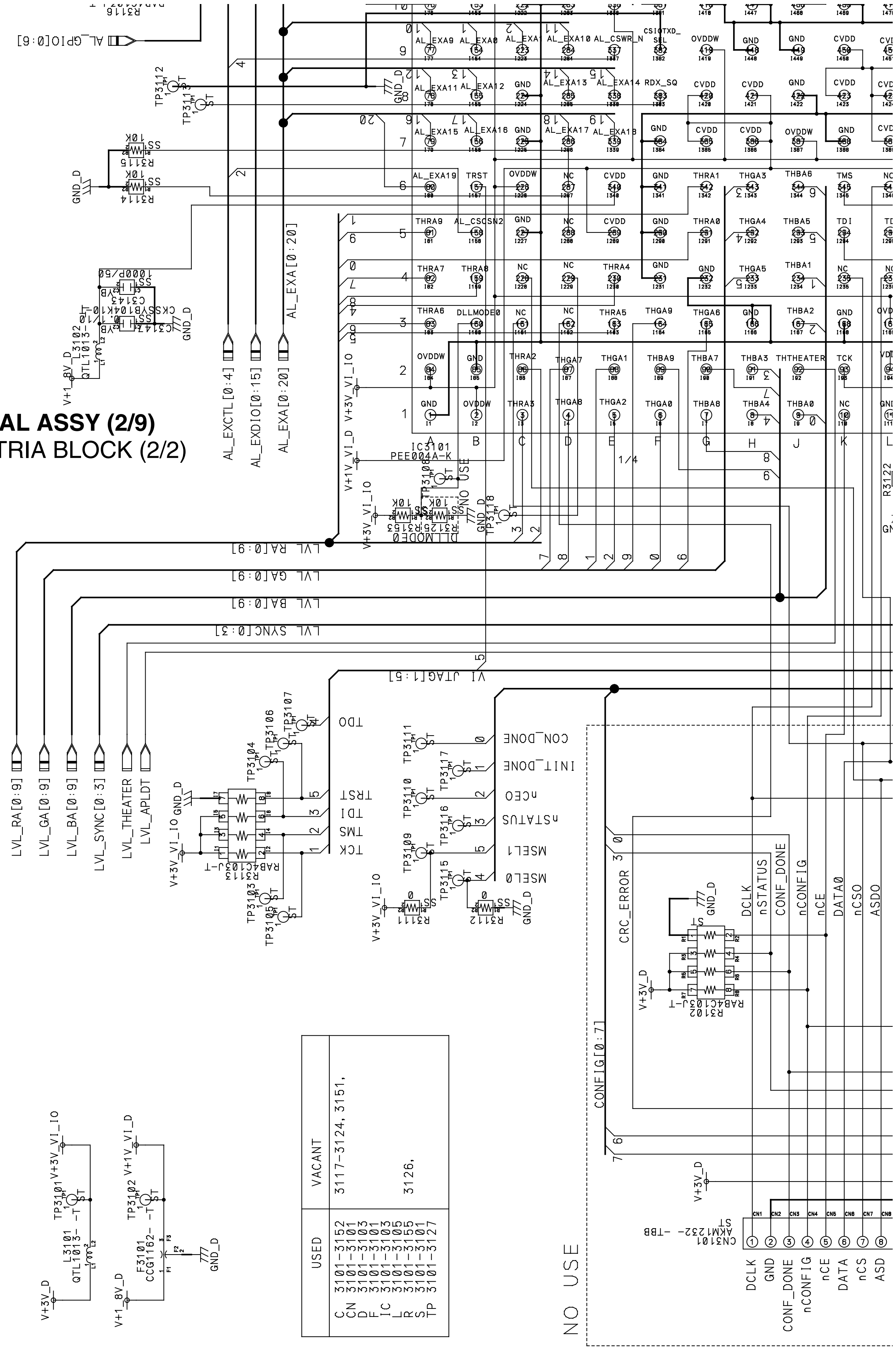
48


GND_D
V+3V_VI_IO
C3112 C3113 C3114 C3115 C3116
C3127 C3128 C3129 C3130 C3131 C3132 C3133 C3134 C3135 C3136 C3137 C3138 C3139 C3140 C3141 C3142
CKSSYB104K10-T
0.1/10
SS
VI_CLKS
R3118
RAB4C103J-T
AR_EXA[0:20]
AR_EXDIO[0:15]
AR_EXCTL[0:4]
TP3125
TP3126
TP3127
TP3123
TP3122
ST
BA AL VI[0:9]
NO USE
10K
R3150
R3151
R3117
R3149
R3152
R3119
R3127
R3128
V+1.8V_D
L3104
QTL1013-T
1000P/50
C3145
C3149
C3152
5P
CH
IC3101
PEE004A-K
PLLBYPASS
PLL_EN
AR_EXCTL[0:4]
AR_EXA[0:20]
AR_EXDIO[0:15]
J K L M N P R T U V W Y AA AB
22 21 20 19 18 17 16 15 14 13 12 11 10
AL_BA5 AL_BA2 NC NC AR_EXA19 AR_EXA18 AR_EXA14 AR_EXA10 AR_EXA0 AR_EXA8 AR_EXA5 AR_EXA2 OVDDW GND
AL_BA6 AL_BA3 CLKS NC AR_CSCSN2 AR_EXA17 AR_EXA13 AR_EXA1 AR_EXA9 AR_EXA7 AR_EXA4 AR_EXA3 GND OVDDW
AL_BA7 GND IVDDW OVDDW NC AR_EXA16 GND GND GND AR_EXA6 NC AR_EXDIO1 AR_EXDIO8 AR_EXDIO0
AL_BA8 GND AL_BA1 AL_BA0 GND AR_EXA15 AR_EXA12 OVDDW AR_CSWR_N NC GND AR_EXDIO10 AR_EXDIO2 AR_EXDIO9
AL_BA9 AL_BA4 NC PLLBYPASS NC PLLEN AR_EXA11 NC NC GND AR_EXDIO12 AR_EXDIO4 AR_EXDIO11 AR_EXDIO3
CON_L AR_CSIOTXD AL_CSIOTXD NC NC UARTTXD UARTRXD GND CVDD GND OVDDW AR_EXDIO5 ARST_N RESETX
OVDDW GND CVDD GND GND OVDDW CVDD GND CVDD GND AR_EXDIO14 GND AR_EXDIO6 AR_EXDIO13
GND GND GND CVDD CVDD GND CVDD CVDD AR_GPIO2 AR_CSWR_N AR_EXDIO15 GND AR_EXDIO7 AR_DCLK
GND CVDD CVDD CVDD CVDD CVDD GND OVDDW AR_GPIO1 AR_HDI AR_VDI AR_DEI AR_RB8 AR_RB9
CVDD GND GND GND GND CVDD GND GND AR_GPIO0 OVDDW GND GND AR_RB6 AR_RB7
CVDD GND GND GND GND CVDD CVDD CVDD CLKFBIN NC CLKD IVDDW AR_RB4 AR_RB5
CVDD GND GND GND GND CVDD GND GND CLKFBOUT AR_UARTTXD AR_RB1 OVDDW AR_RB2 AR_RB3
CVDD GND GND GND GND CVDD CVDD GND AR_UARTRXD OVDDW GND GND AR_GB9 AR_RB0
AR_TRNSENDC AR_THEATER
RESETX_VI
AR_GPIO[0:6]
VI_CLKD
AR_UARTRXD_VI
AR_UARTTXD_VI
AR_TRNSENDO

FHD DIGITAL ASSY (2/9)

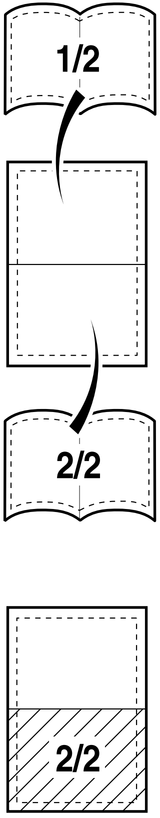
• ASIC VICTRIA BLOCK (2/2)

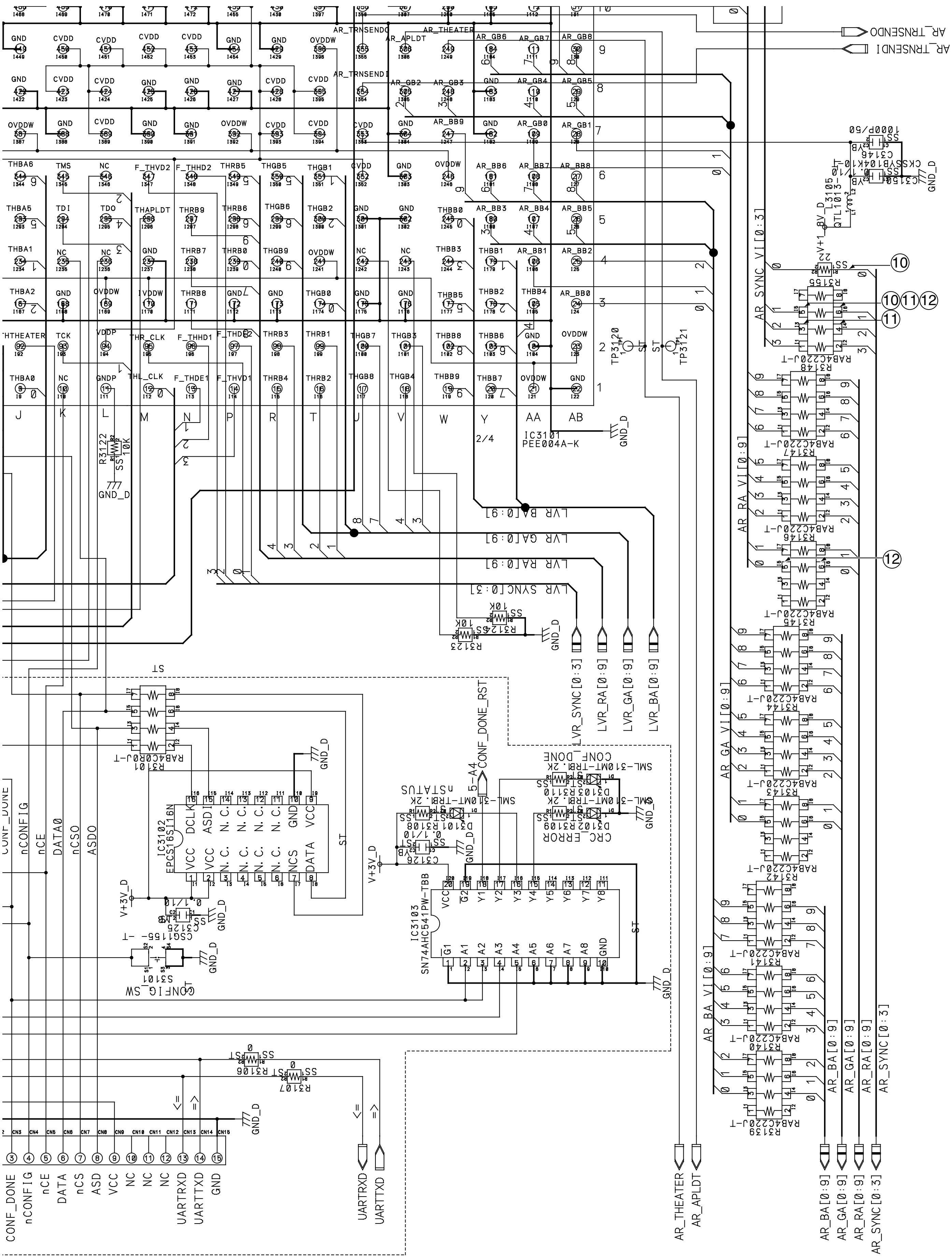
NO USE


IC3101
PEE004A-K
AL_EXCTL[0:4]
AL_EXDIO[0:15]
AL_EXA[0:20]
AL_GPIO[0:6]
LVL_RA[0:9]
LVL_GA[0:9]
LVL_BA[0:9]
LVL_SYNC[0:3]
LVL_THEATER
LVL_APLDT
VI_JTAG[1:5]
TDO
TRST
TDI
TMS
TCK
CON_DONE
INIT_DONE
nCEO
nSTATUS
MSEL1
MSEL0
CRC_ERROR
CONFIG[0:7]
CN3101
AKM1232-TBB
DCLK
GND
CONF_DONE
nCONFIG
nCE
DATA
nCS
ASD
RAB4C103J-T
R3102
NO USE
V+3V_D
V+1_8V_D
V+3V_VI_IO
V+1V_VI_D
GND_D
L3101
QTL1013-
F3101
CCG1162-
TP3101
TP3102

USED		VACANT
C	3101–3152	3117–3124, 3151,
CN	3101–3101	
D	3101–3103	
F	3101–3101	
IC	3101–3103	
L	3101–3105	
R	3101–3155	3126,
S	3101–3101	
TP	3101–3127	

Large size SCH diagram




IC3101
PEE004A-K
IC3102
EPCS16SI16N
IC3103
SN74AHC541PW-TBB
AR_TRNSENDO
AR_TRNSENDI
AR_THEATER
AR_APLDT
LVR_SYNC[0:3]
LVR_RA[0:9]
LVR_GA[0:9]
LVR_BA[0:9]
AR_SYNC VI[0:3]
AR_RA VI[0:9]
AR_GA VI[0:9]
AR_BA VI[0:9]
AR_BA[0:9]
AR_GA[0:9]
AR_RA[0:9]
AR_SYNC[0:3]
CONF_DONE_RST
CONF_DONE
nSTATUS
CRC_ERROR
CONFIG_SW
S3101
CSG1155-T
R3101
RAB4CR0J-T
R3122
10K
R3123
R3124
R3106
R3107
R3108
R3109
R3110
D3101
D3102
D3103
SML-310MT-TRBL 2K
C3125
C3126
0.1/10
C3146
1000P/50
L3105
QTL1013-01
CKSSYB104K10
V+1_8V_D
V+3V_D
GND_D
TP3120
TP3121
RAB4C220J-T
R3139
R3140
R3141
R3142
R3143
R3144
R3145
R3146
R3147
R3148
R3155
CONF_DONE
nCONFIG
nCE
DATA
nCS
ASD
VCC
NC
NC
NC
UARTRXD
UARTTXD
GND
UARTRXD
UARTTXD
J
K
L
M
N
P
R
T
U
V
W
Y
AA
AB
2/4
ST

A
B
C
D
E
F

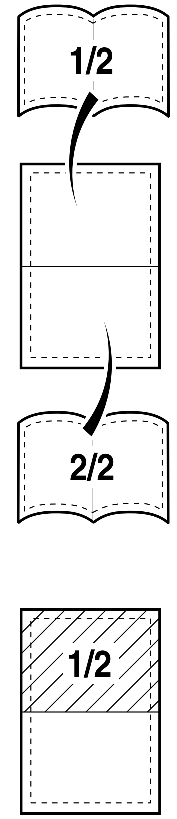
1.22 FHD DIGITAL ASSY (3/9)

FHD DIGITAL ASSY (3/9)

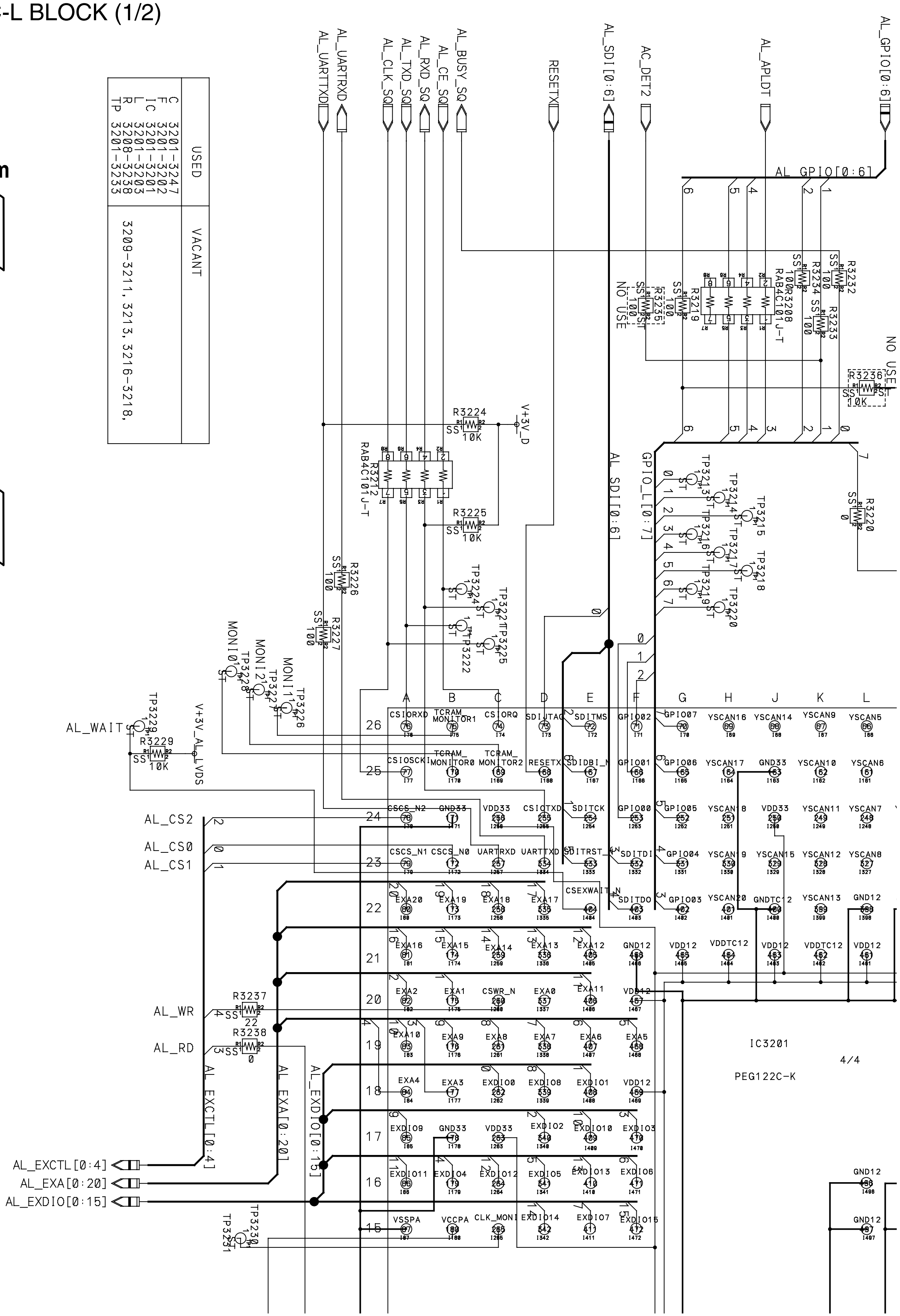
- SQ ASIC-L BLOCK (1/2)

▭ NO USE

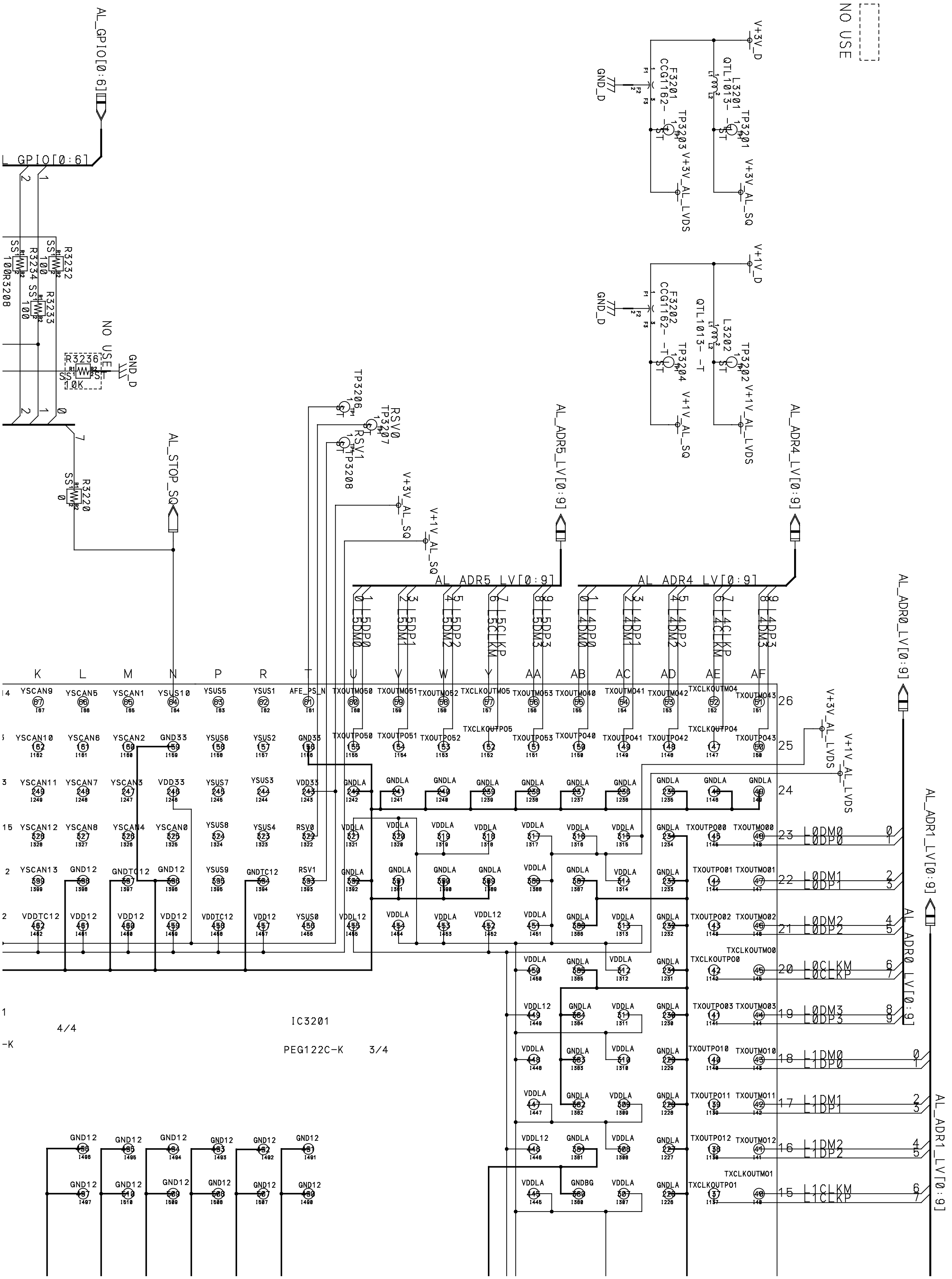
Large size SCH diagram



	USED	VACANT
C	3201-3247	3209-3211, 3213, 3216-3218,
F	3201-3202	
IC	3201-3201	
L	3201-3203	
R	3208-3238	
TP	3201-3233	



AL_UARTTXD
AL_UARTRXD
AL_CLK_SQ
AL_TXD_SQ
AL_RXD_SQ
AL_CE_SQ
AL_BUSY_SQ
RESETX
AL_SDI[0:6]
AC_DET2
AL_APLDT
AL_GPIO[0:6]
AL_GPIO[0:6]
NO USE
R3232 SS 100
R3233 SS 100
R3234 SS 100
R3208 RAB4C101J-T
R3219 SS 100
R3235 SS 100
NO USE
R3236 SS 10K
R3224 SS 10K
V+3V_D
R3212 RAB4C101J-T
R3225 SS 10K
R3226 SS 100
R3227 SS 100
R3220 SS 0
AL_SDI[0:6]
GPIO_L[0:7]
TP3213
TP3214
TP3215
TP3216
TP3217
TP3218
TP3219
TP3220
TP3221
TP3222
TP3223
TP3224
TP3225
TP3226
TP3227
TP3228
MONI0
MONI1
MONI2
TP3229
AL_WAIT
R3229 SS 10K
V+3V_AL_LVDS
AL_CS2
AL_CS0
AL_CS1
AL_WR
R3237 SS 22
AL_RD
R3238 SS 0
AL_EXCTL[0:4]
AL_EXA[0:20]
AL_EXDIO[0:15]
AL_EXCTL[0:4]
AL_EXA[0:20]
AL_EXDIO[0:15]
TP3230
TP3231
A B C D E F G H J K L
26 CSIORXD TCRAM_MONITOR1 CSIORQ SDIJTAG SDITMS GPIO02 GPIO07 YSCAN16 YSCAN14 YSCAN9 YSCAN5
25 CSIOSCK TCRAM_MONITOR0 TCRAM_MONITOR2 RESETX SDIDBI_N GPIO01 GPIO06 YSCAN17 GND33 YSCAN10 YSCAN6
24 CSCS_N2 GND33 VDD33 CSIOTXD SDITCK GPIO00 GPIO05 YSCAN18 VDD33 YSCAN11 YSCAN7
23 CSCS_N1 CSCS_N0 UARTRXD UARTTXD SDITRST_N SDITDI GPIO04 YSCAN19 YSCAN15 YSCAN12 YSCAN8
22 EXA20 EXA19 EXA18 EXA17 CSEXWAIT_N SDITDO GPIO03 YSCAN20 GNDTC12 YSCAN13 GND12
21 EXA16 EXA15 EXA14 EXA13 EXA12 GND12 VDD12 VDDTC12 VDD12 VDDTC12 VDD12
20 EXA2 EXA1 CSWR_N EXA0 EXA11 VDD12
19 EXA10 EXA9 EXA8 EXA7 EXA6 EXA5
18 EXA4 EXA3 EXDIO0 EXDIO8 EXDIO1 VDD12
17 EXDIO9 GND33 VDD33 EXDIO2 EXDIO10 EXDIO3
16 EXDIO11 EXDIO4 EXDIO12 EXDIO5 EXDIO13 EXDIO6
15 VSSPA VCCPA CLK_MONI EXDIO14 EXDIO7 EXDIO15
GND12
GND12
IC3201
PEG122C-K
4/4

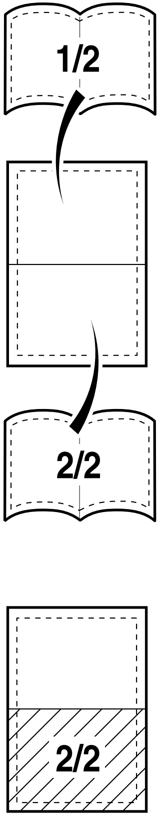

NO USE
V+3V_D
L3201
QTL1013- -T
TP3201
ST
V+3V_AL_SQ
F3201
CCG1162- -T
GND_D
TP3203
V+3V_AL_LVDS
V+1V_D
L3202
QTL1013- -T
TP3202
V+1V_AL_LVDS
F3202
CCG1162- -T
TP3204
V+1V_AL_SQ
AL_GPIO[0:6]
R3232
R3233
R3234
R3208
SS
100
NO USE
R3236
10K
R3220
0
AL_STOP_SQ
TP3206
RSV0
TP3207
RSV1
TP3208
V+3V_AL_SQ
V+1V_AL_SQ
AL_ADR5_LV[0:9]
AL_ADR4_LV[0:9]
L5DM0
L5DP0
L5DM1
L5DP1
L5DM2
L5DP2
L5CLKM
L5CLKP
L5DM3
L5DP3
L4DM0
L4DP0
L4DM1
L4DP1
L4DM2
L4DP2
L4CLKM
L4CLKP
L4DM3
L4DP3
K L M N P R T U V W Y AA AB AC AD AE AF
YSCAN9
YSCAN5
YSCAN1
YSUS10
YSUS5
YSUS1
AFE_PS_N
TXOUTM050
TXOUTM051
TXOUTM052
TXCLKOUTM05
TXOUTM053
TXOUTM040
TXOUTM041
TXOUTM042
TXCLKOUTM04
TXOUTM043
YSCAN10
YSCAN6
YSCAN2
GND33
YSUS6
YSUS2
TXOUTP050
TXOUTP051
TXOUTP052
TXCLKOUTP05
TXOUTP053
TXOUTP040
TXOUTP041
TXOUTP042
TXCLKOUTP04
TXOUTP043
YSCAN11
YSCAN7
YSCAN3
VDD33
YSUS7
YSUS3
GNDLA
YSCAN12
YSCAN8
YSCAN4
YSCAN0
YSUS8
YSUS4
RSV0
VDDLA
TXOUTP000
TXOUTM000
YSCAN13
GND12
GNDTC12
YSUS9
RSV1
TXOUTP001
TXOUTM001
VDDTC12
VDD12
YSUS0
VDDL12
TXOUTP002
TXOUTM002
TXCLKOUTM00
TXCLKOUTP00
TXOUTP003
TXOUTM003
TXOUTP010
TXOUTM010
TXOUTP011
TXOUTM011
TXOUTP012
TXOUTM012
TXCLKOUTM01
TXCLKOUTP01
GNDBG
26
25
24
23
22
21
20
19
18
17
16
15
L0DM0
L0DP0
L0DM1
L0DP1
L0DM2
L0DP2
L0CLKM
L0CLKP
L0DM3
L0DP3
L1DM0
L1DP0
L1DM1
L1DP1
L1DM2
L1DP2
L1CLKM
L1CLKP
AL_ADR0_LV[0:9]
AL_ADR1_LV[0:9]
IC3201
PEG122C-K 3/4
4/4

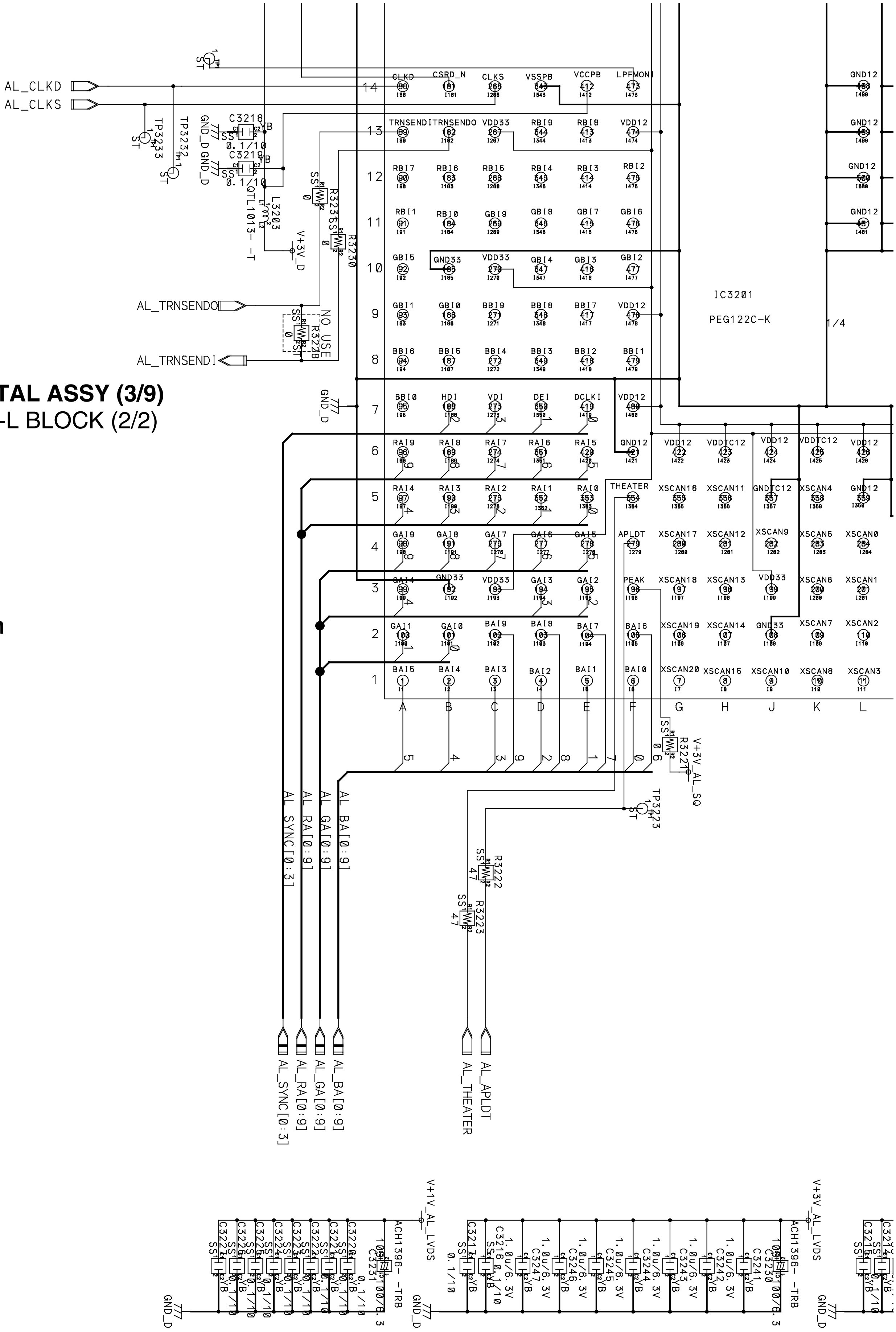
FHD DIGITAL ASSY (3/9)

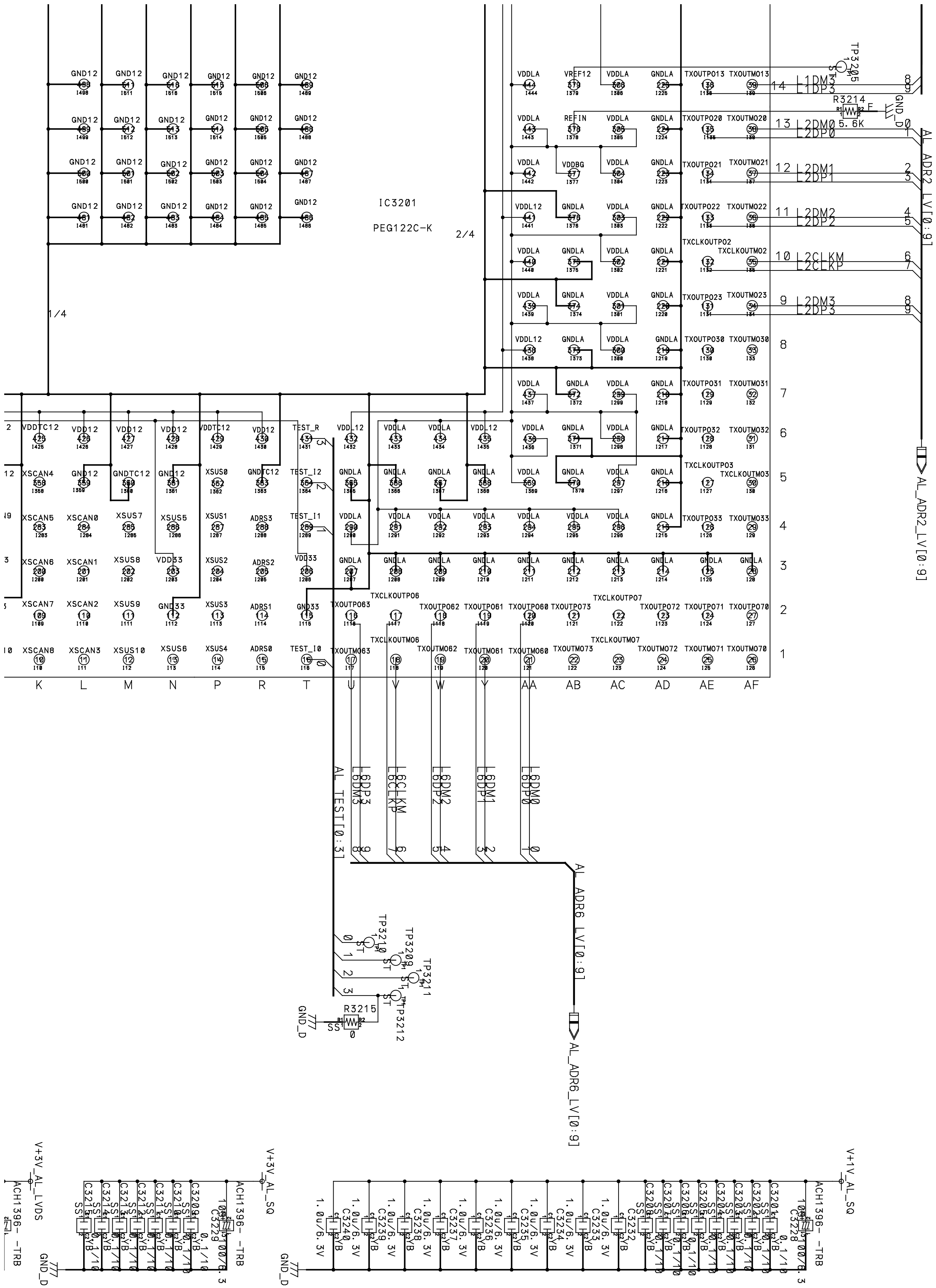
- SQ ASIC-L BLOCK (2/2)

NO USE

Large size SCH diagram




AL_CLKD
AL_CLKS
AL_TRNSENDO
AL_TRNSENDI
TP3233
TP3232
TP3223
C3218
C3219
0.1/10
L3203
QTL1013- -T
R3231
R3230
R3228
NO USE
R3221
R3222
R3223
47
V+3V_D
V+3V_AL_SQ
GND_D
IC3201
PEG122C-K
1/4
CLKD
CSRD_N
CLKS
VSSPB
VCCPB
LPFMONI
TRNSENDI
TRNSENDO
VDD33
VDD12
GND12
GND33
THEATER
APLDT
PEAK
XSCAN0
XSCAN1
XSCAN2
XSCAN3
XSCAN4
XSCAN5
XSCAN6
XSCAN7
XSCAN8
XSCAN9
XSCAN10
XSCAN11
XSCAN12
XSCAN13
XSCAN14
XSCAN15
XSCAN16
XSCAN17
XSCAN18
XSCAN19
XSCAN20
VDDTC12
GNDTC12
HDI
VDI
DEI
DCLKI
A B C D E F G H J K L
1 2 3 4 5 6 7 8 9 10 11 12 13 14
AL_SYNC[0:3]
AL_RA[0:9]
AL_GA[0:9]
AL_BA[0:9]
AL_THEATER
AL_APLDT
V+1V_AL_LVDS
V+3V_AL_LVDS
ACH1396- -TRB
C3231
C3230
100/6.3
C3220
C3221
C3222
C3223
C3224
C3225
C3226
C3227
C3216
C3217
C3241
C3242
C3243
C3244
C3245
C3246
C3247
1.0u/6.3V
C3214
C3215

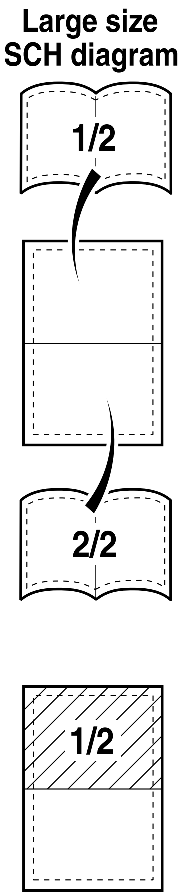

IC3201
PEG122C-K
1/4
2/4
TP3205
ST
R3214
5.6K
GND_D
14 L1DM3 L1DP3 8 9
13 L2DM0 L2DP0 0 1
12 L2DM1 L2DP1 2 3
11 L2DM2 L2DP2 4 5
10 L2CLKM L2CLKP 6 7
9 L2DM3 L2DP3 8 9
AL_ADR2_LV[0:9]
GND12
VDDLA
VREF12
REFIN
VDDBG
VDDL12
GNDLA
TXOUTP013 TXOUTM013
TXOUTP020 TXOUTM020
TXOUTP021 TXOUTM021
TXOUTP022 TXOUTM022
TXCLKOUTP02 TXCLKOUTM02
TXOUTP023 TXOUTM023
TXOUTP030 TXOUTM030
TXOUTP031 TXOUTM031
TXOUTP032 TXOUTM032
TXCLKOUTP03 TXCLKOUTM03
TXOUTP033 TXOUTM033
VDDTC12
VDD12
TEST_R
TEST_I2
TEST_I1
TEST_I0
XSCAN0 XSCAN1 XSCAN2 XSCAN3 XSCAN4 XSCAN5 XSCAN6 XSCAN7 XSCAN8
XSUS0 XSUS1 XSUS2 XSUS3 XSUS4 XSUS5 XSUS6 XSUS7 XSUS8 XSUS9 XSUS10
GNDTC12
VDD33
GND33
ADRS0 ADRS1 ADRS2 ADRS3
TXCLKOUTP06 TXCLKOUTM06
TXOUTP063 TXOUTP062 TXOUTP061 TXOUTP060
TXOUTM063 TXOUTM062 TXOUTM061 TXOUTM060
TXCLKOUTP07 TXCLKOUTM07
TXOUTP073 TXOUTP072 TXOUTP071 TXOUTP070
TXOUTM073 TXOUTM072 TXOUTM071 TXOUTM070
K L M N P R T U V W Y AA AB AC AD AE AF
1 2 3 4 5 6 7 8
AL_TEST[0:3]
L6DP3 L6DM3
L6CLKM L6CLKP
L6DM2 L6DP2
L6DP1 L6DM1
L6DP0 L6DM0
AL_ADR6_LV[0:9]
TP3210
TP3209
TP3211
TP3212
R3215
0
SS
V+3V_AL_LVDS
V+3V_AL_SQ
V+1V_AL_SQ
ACH1396-TRB
C3209 C3210 C3211 C3212 C3213 C3214 C3215
0.1/10
YB
C3229
100/6.3
C3201 C3202 C3203 C3204 C3205 C3206 C3207 C3208
C3228
C3232 C3233 C3234 C3235 C3236 C3237 C3238 C3239 C3240
1.0u/6.3V

1.23 FHD DIGITAL ASSY (4/9)

FHD DIGITAL ASSY (4/9)

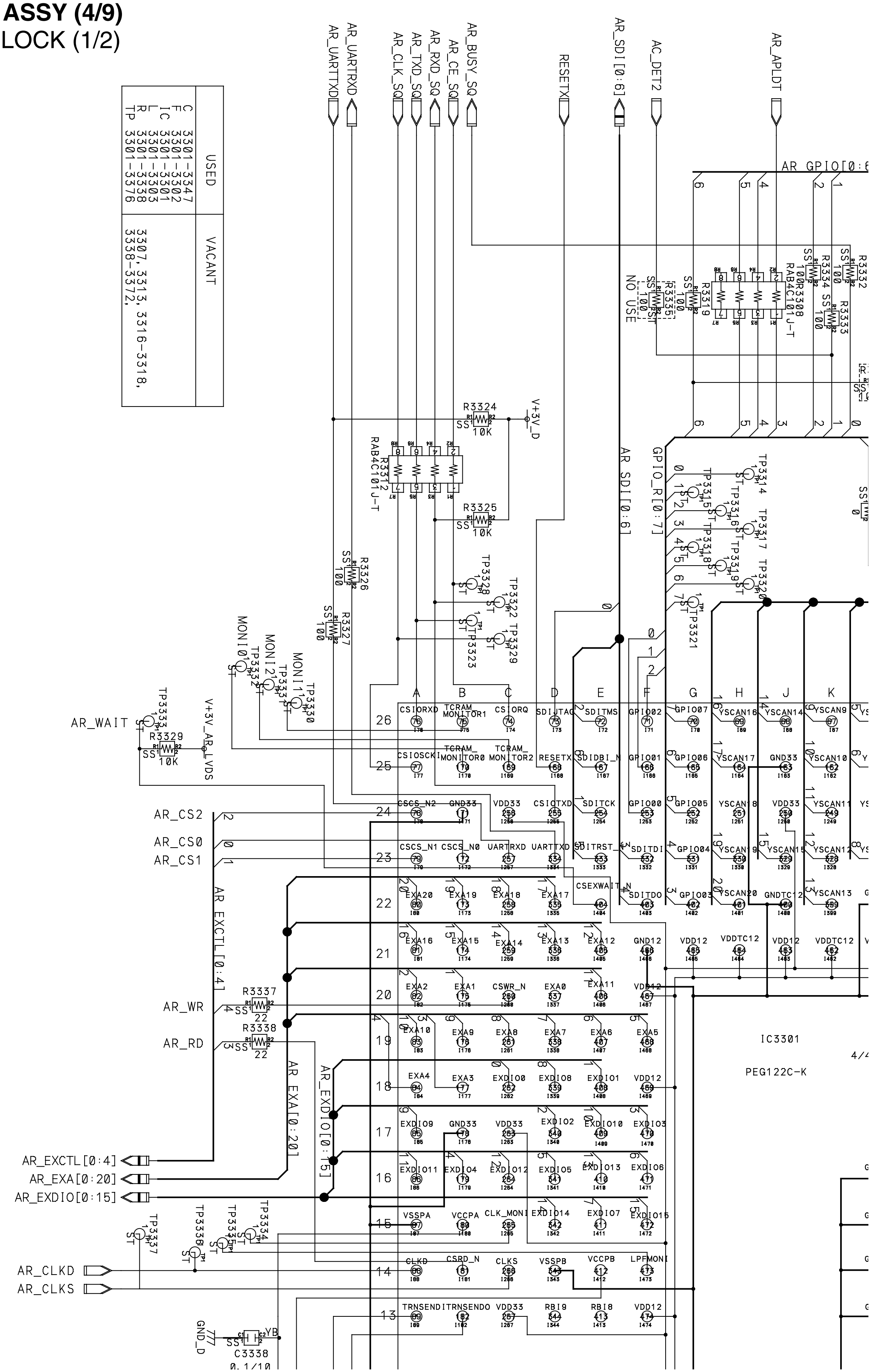
• SQ ASIC-R BLOCK (1/2)

NO USE

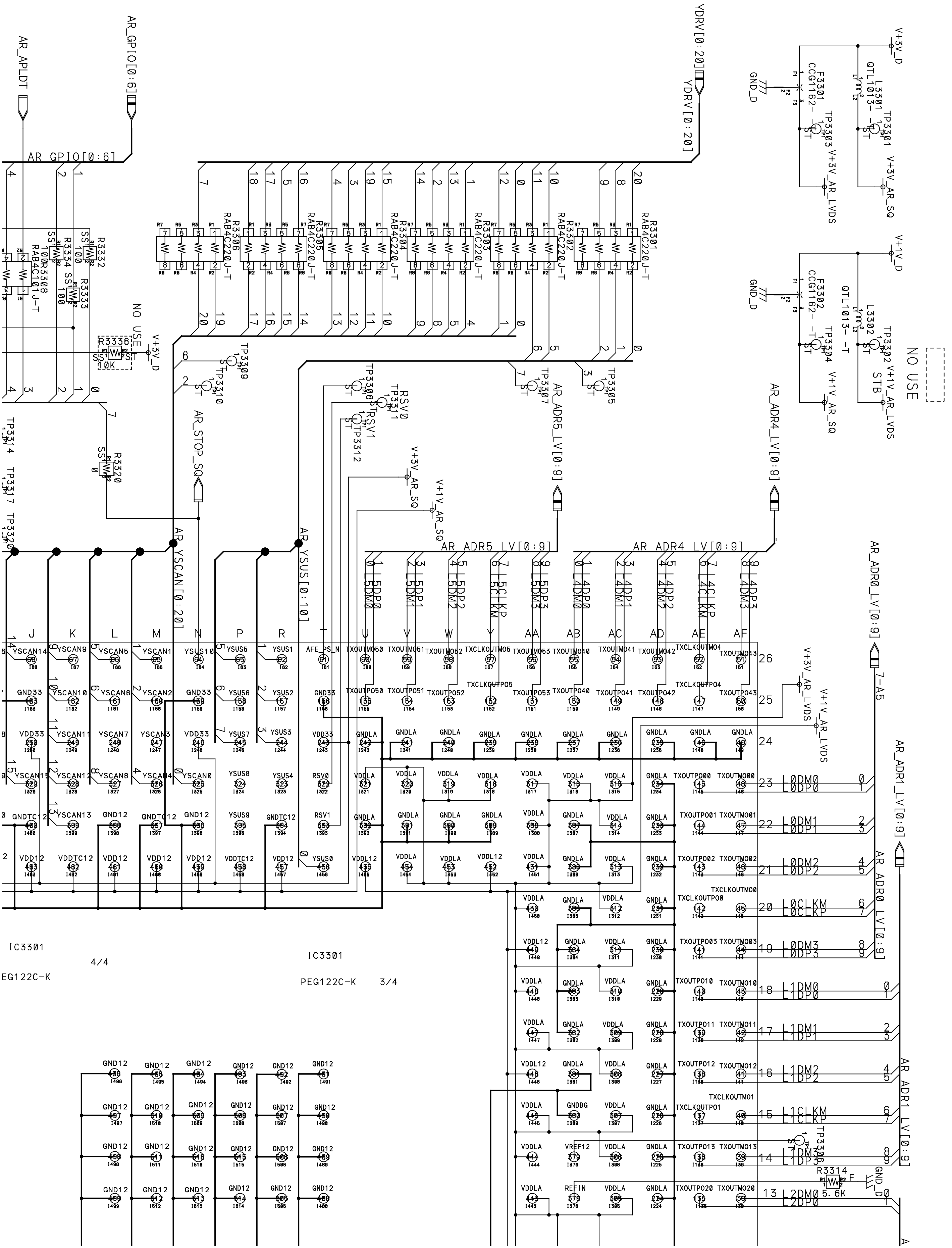


Large size
SCH diagram
1/2
2/2
1/2

	USED	VACANT
C	3301-3347	3307, 3313, 3316-3318, 3338-3372,
F	3301-3302	
IC	3301-3301	
L	3301-3303	
R	3301-3338	
TP	3301-3376	



AR_UARTTXD
AR_UARTRXD
AR_CLK_SQ
AR_TXD_SQ
AR_RXD_SQ
AR_CE_SQ
AR_BUSY_SQ
RESETX
AR_SDI[0:6]
AC_DET2
AR_APLDT
AR GPIO[0:6
R3332 SS 100
R3333 SS 100
R3334
R3308 RAB4C101J-T
R3319 SS 100
R3335 SS 100 NO USE
R3324 SS 10K
V+3V_D
R3312 RAB4C101J-T
R3325 SS 10K
R3326 SS 100
R3327 SS 100
TP3328 ST
TP3322 ST
TP3323 ST
TP3329 ST
AR SDI[0:6]
GPIO_R[0:7]
TP3314 ST
TP3315 ST
TP3316 ST
TP3317 ST
TP3318 ST
TP3319 ST
TP3320 ST
TP3321
MONI0 TP3332 ST
MONI1 TP3330 ST
MONI2 TP3331 ST
AR_WAIT
TP3333 ST
R3329 SS 10K
V+3V_AR_LVDS
AR_CS2
AR_CS0
AR_CS1
AR EXCTL[0:4]
AR_WR
R3337 SS 22
AR_RD
R3338 SS 22
AR EXA[0:20]
AR_EXDIO[0:15]
AR_EXCTL[0:4]
AR_EXA[0:20]
AR_EXDIO[0:15]
TP3337 ST
TP3336 ST
TP3335 ST
TP3334 ST
AR_CLKD
AR_CLKS
GND_D
C3338 SS 0.1/10 YB
A B C D E F G H J K
26 CSIORXD TCRAM_MONITOR1 CSIORQ SDITACK SDITMS GPIO02 GPIO07 YSCAN16 YSCAN14 YSCAN9
25 CSIOSCKI TCRAM_MONITOR0 TCRAM_MONITOR2 RESETX SDIDBI_N GPIO01 GPIO06 YSCAN17 GND33 YSCAN10
24 CSCS_N2 GND33 VDD33 CSIOTXD SDITCK GPIO00 GPIO05 YSCAN18 VDD33 YSCAN11
23 CSCS_N1 CSCS_N0 UARTRXD UARTTXD SDITRST_N SDITDI GPIO04 YSCAN19 YSCAN15 YSCAN12
22 EXA20 EXA19 EXA18 EXA17 CSEXWAIT_N SDITDO GPIO03 YSCAN20 GNDTC12 YSCAN13
21 EXA16 EXA15 EXA14 EXA13 EXA12 GND12 VDD12 VDDTC12 VDD12 VDDTC12
20 EXA2 EXA1 CSWR_N EXA0 EXA11 VDD12
19 EXA10 EXA9 EXA8 EXA7 EXA6 EXA5
18 EXA4 EXA3 EXDIO0 EXDIO8 EXDIO1 VDD12
17 EXDIO9 GND33 VDD33 EXDIO2 EXDIO10 EXDIO3
16 EXDIO11 EXDIO4 EXDIO12 EXDIO5 EXDIO13 EXDIO6
15 VSSPA VCCPA CLK_MONI EXDIO14 EXDIO7 EXDIO15
14 CLKD CSRD_N CLKS VSSPB VCCPB LPFMONI
13 TRNSENDI TRNSENDO VDD33 RBI9 RBI8 VDD12
IC3301
PEG122C-K
4/4



AR_APLDT
AR_GPIO[0:6]
YDRV[0:20]
V+3V_D
L3301 QTL1013- -T
F3301 CCG1162- -T
GND_D
TP3301 ST
TP3303 ST
V+3V_AR_SQ
V+3V_AR_LVDS
V+1V_D
L3302 QTL1013- -T
F3302 CCG1162- -T
TP3302 ST
TP3304 ST
V+1V_AR_LVDS STB
V+1V_AR_SQ
NO USE
R3301 RAB4C220J-T
R3302 RAB4C220J-T
R3303 RAB4C220J-T
R3304 RAB4C220J-T
R3305 RAB4C220J-T
R3306 RAB4C220J-T
R3332 SS 100
R3333 SS 100
R3334
R3308 100 RAB4C101J-T
R3336 SS 10K
V+3V_D
R3320 SS 0
TP3309 ST
TP3310 ST
TP3308 ST
TP3311 ST
TP3312 ST
TP3307 ST
TP3305 ST
RSV0
RSV1
AR_STOP_SQ
AR_ADR5_LV[0:9]
AR_ADR4_LV[0:9]
AR_YSCAN[0:20]
AR_YSUS[0:10]
TP3314
TP3317
TP3320
L5DM0 L5DP0 L5DM1 L5DP1 L5DM2 L5DP2 L5CLKM L5CLKP L5DM3 L5DP3
L4DM0 L4DP0 L4DM1 L4DP1 L4DM2 L4DP2 L4CLKM L4CLKP L4DM3 L4DP3
J K L M N P R T U V W Y AA AB AC AD AE AF
YSCAN14 YSCAN9 YSCAN5 YSCAN1 YSUS10 YSUS5 YSUS1 AFE_PS_N TXOUTM050 TXOUTM051 TXOUTM052 TXCLKOUTM05 TXOUTM053 TXOUTM040 TXOUTM041 TXOUTM042 TXCLKOUTM04 TXOUTM043
GND33 YSCAN10 YSCAN6 YSCAN2 GND33 YSUS6 YSUS2 GND33 TXOUTP050 TXOUTP051 TXOUTP052 TXCLKOUTP05 TXOUTP053 TXOUTP040 TXOUTP041 TXOUTP042 TXCLKOUTP04 TXOUTP043
VDD33 YSCAN11 YSCAN7 YSCAN3 VDD33 YSUS7 YSUS3 VDD33 GNDLA
YSCAN15 YSCAN12 YSCAN8 YSCAN4 YSCAN0 YSUS8 YSUS4 RSV0 VDDLA
GNDTC12 YSCAN13 GND12 GNDTC12 GND12 YSUS9 GNDTC12 RSV1
VDD12 VDDTC12 VDD12 VDD12 VDD12 VDDTC12 VDD12 YSUS0 VDDL12
VDDLA GNDLA VDDL12 GNDBG VREF12 REFIN
TXOUTP000 TXOUTM000 TXOUTP001 TXOUTM001 TXOUTP002 TXOUTM002 TXCLKOUTM00 TXCLKOUTP00 TXOUTP003 TXOUTM003
TXOUTP010 TXOUTM010 TXOUTP011 TXOUTM011 TXOUTP012 TXOUTM012 TXCLKOUTM01 TXCLKOUTP01 TXOUTP013 TXOUTM013 TXOUTP020 TXOUTM020
26 25 24 23 22 21 20 19 18 17 16 15 14 13
L0DM0 L0DP0 L0DM1 L0DP1 L0DM2 L0DP2 L0CLKM L0CLKP L0DM3 L0DP3
L1DM0 L1DP0 L1DM1 L1DP1 L1DM2 L1DP2 L1CLKM L1CLKP L1DM3 L1DP3
L2DM0 L2DP0
7-A5
AR_ADR0_LV[0:9]
AR_ADR1_LV[0:9]
TP3306
R3314 F 5.6K
GND_D
IC3301 4/4 EG122C-K
IC3301 PEG122C-K 3/4
GND12

A B C D E F

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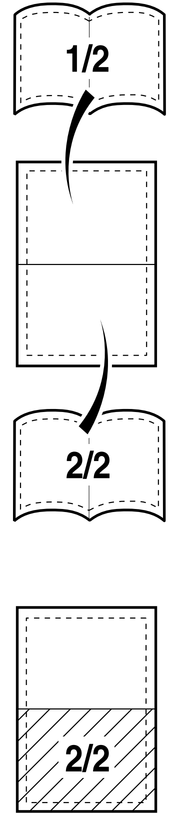
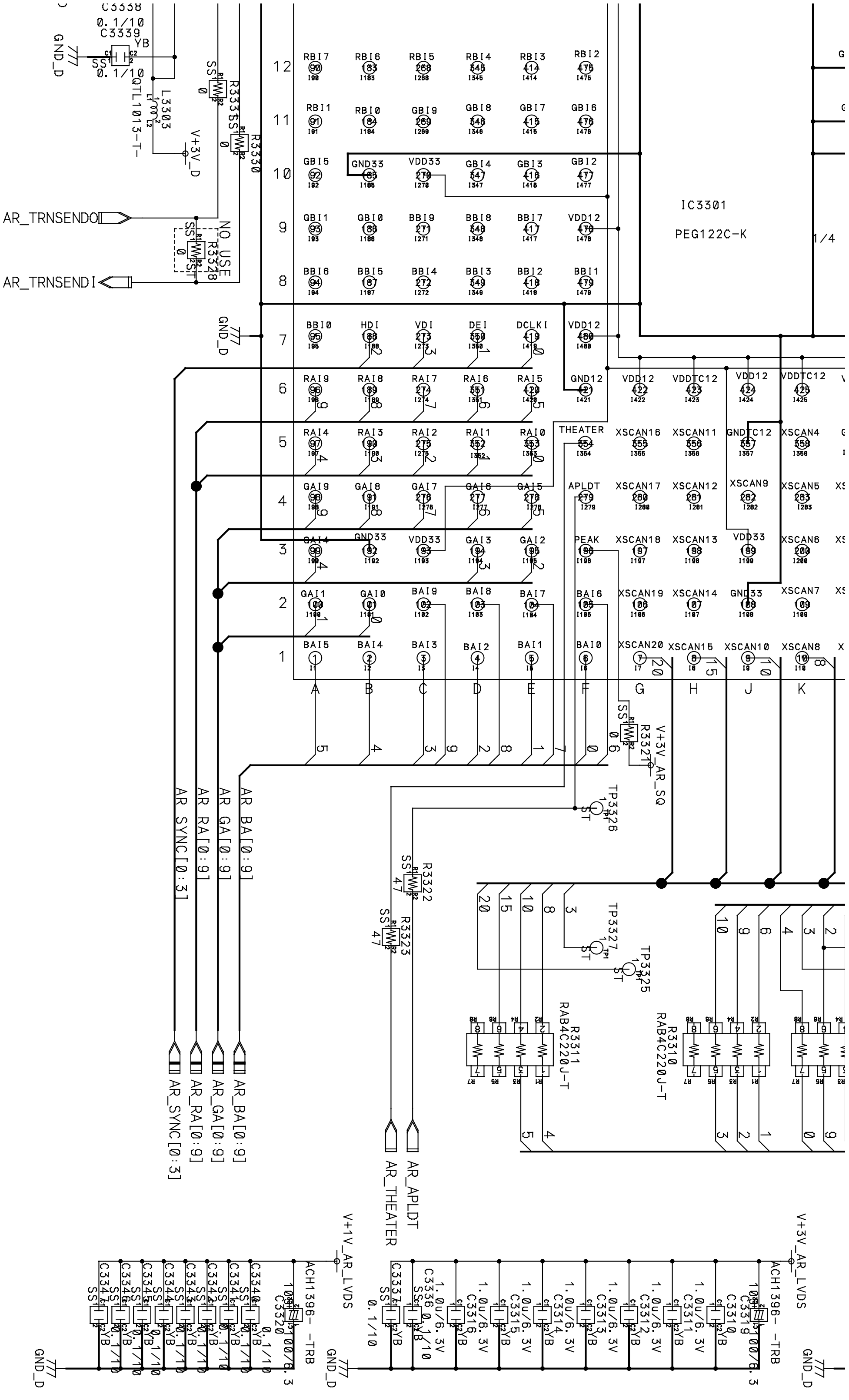
FHD DIGITAL ASSY (4/9)

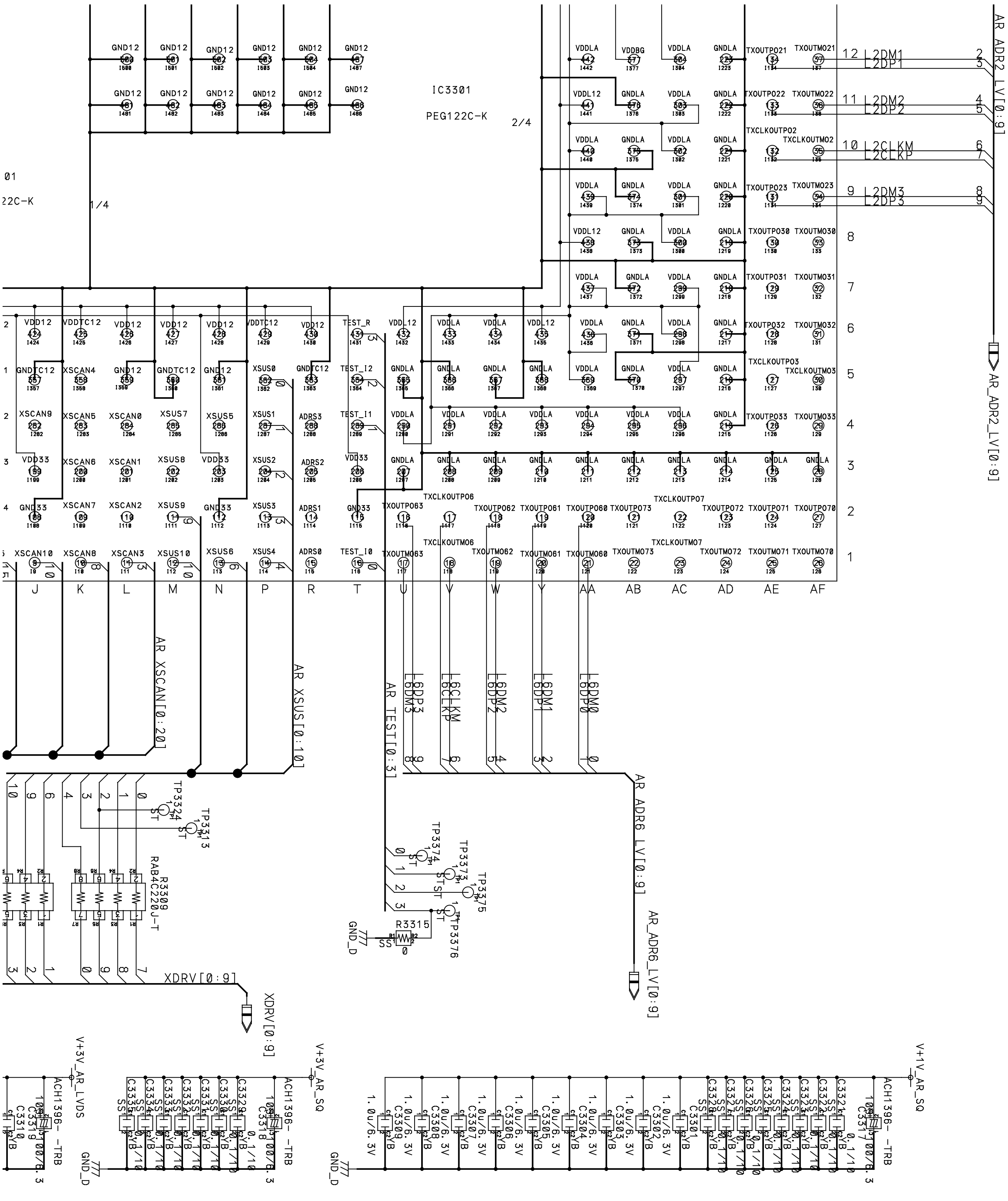
• SQ ASIC-R BLOCK (2/2)

NO USE

Large size SCH diagram



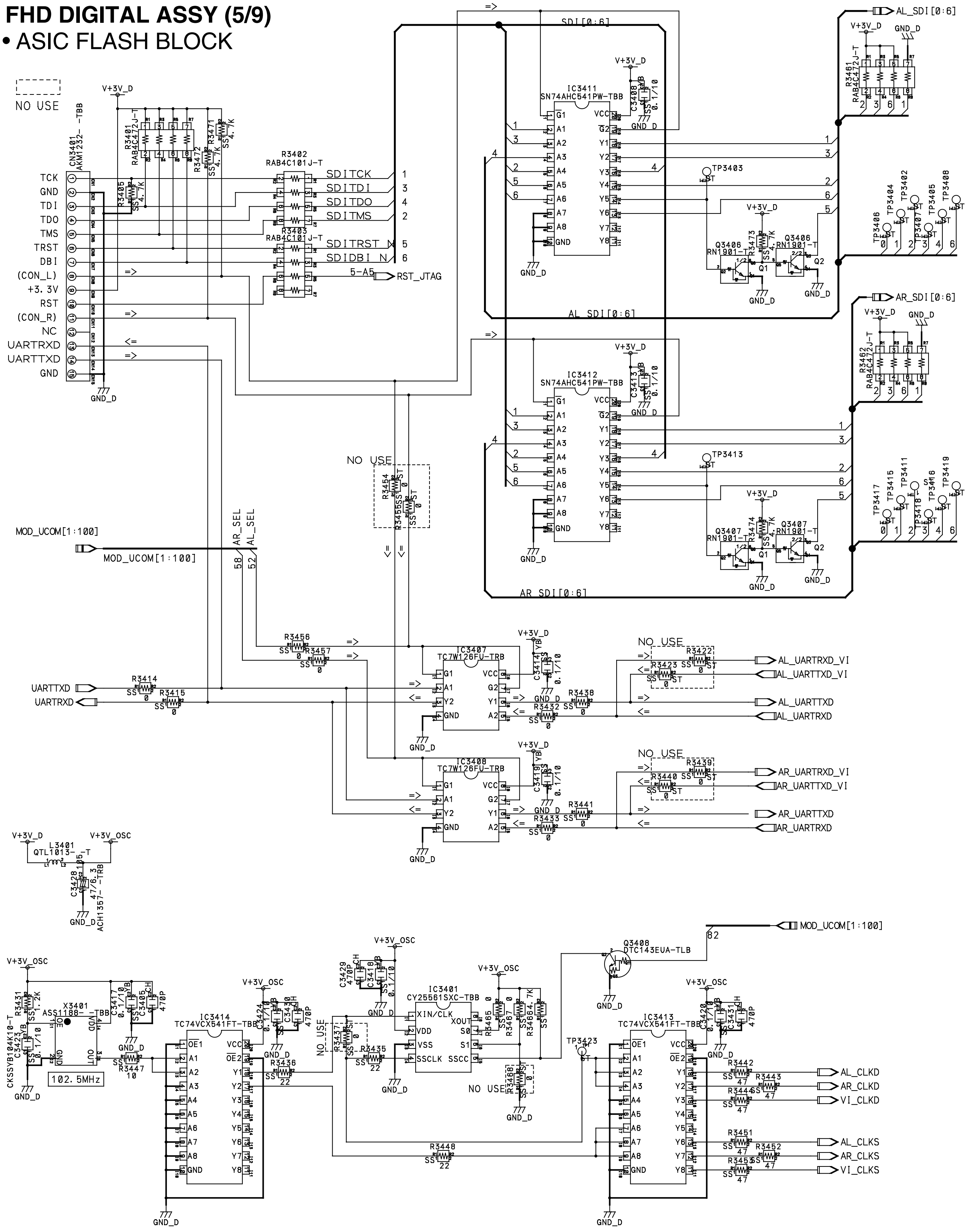

C3338
0.1/10
C3339
YB
SS
0.1/10
GND_D
L3303
QTL1013-T-
R3331
SS
0
R3330
0
V+3V_D
AR_TRNSENDO
AR_TRNSENDI
NO USE
R3328
SS
0
GND_D
IC3301
PEG122C-K
1/4
RBI7
RBI6
RBI5
RBI4
RBI3
RBI2
RBI1
RBI0
GBI9
GBI8
GBI7
GBI6
GBI5
GND33
VDD33
GBI4
GBI3
GBI2
GBI1
GBI0
BBI9
BBI8
BBI7
VDD12
BBI6
BBI5
BBI4
BBI3
BBI2
BBI1
BBI0
HDI
VDI
DEI
DCLKI
VDD12
RAI9
RAI8
RAI7
RAI6
RAI5
GND12
VDD12
VDDTC12
VDD12
VDDTC12
RAI4
RAI3
RAI2
RAI1
RAI0
THEATER
XSCAN16
XSCAN11
GNDTC12
XSCAN4
GAI9
GAI8
GAI7
GAI6
GAI5
APLDT
XSCAN17
XSCAN12
XSCAN9
XSCAN5
GAI4
GND33
VDD33
GAI3
GAI2
PEAK
XSCAN18
XSCAN13
VDD33
XSCAN6
GAI1
GAI0
BAI9
BAI8
BAI7
BAI6
XSCAN19
XSCAN14
GND33
XSCAN7
BAI5
BAI4
BAI3
BAI2
BAI1
BAI0
XSCAN20
XSCAN15
XSCAN10
XSCAN8
12
11
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
J
K
R3327
SS
0
V+3V_AR_SQ
TP3326
ST
AR_SYNC[0:3]
AR_RA[0:9]
AR_GA[0:9]
AR_BA[0:9]
R3322
SS
47
R3323
SS
47
TP3327
ST
TP3325
ST
R3311
RAB4C220J-T
R3310
RAB4C220J-T
AR_SYNC[0:3]
AR_RA[0:9]
AR_GA[0:9]
AR_BA[0:9]
AR_THEATER
AR_APLDT
V+1V_AR_LVDS
ACH1396-TRB
C3320
100/6.3
C3340
C3341
C3342
C3343
C3344
C3345
C3346
C3347
SS
YB
0.1/10
GND_D
C3337
C3336
C3316
C3315
C3314
C3313
C3312
C3311
C3310
C3319
1.0u/6.3V
0.1/10
ACH1396-TRB
100/6.3
V+3V_AR_LVDS
GND_D


IC3301
PEG122C-K
2/4
1/4
01
22C-K
GND12
VDDLA
VDDBG
GNDLA
VDDL12
VDD12
VDDTC12
GNDTC12
VDD33
GND33
XSCAN0
XSCAN1
XSCAN2
XSCAN3
XSCAN4
XSCAN5
XSCAN6
XSCAN7
XSCAN8
XSCAN9
XSCAN10
XSUS0
XSUS1
XSUS2
XSUS3
XSUS4
XSUS5
XSUS6
XSUS7
XSUS8
XSUS9
XSUS10
ADRS0
ADRS1
ADRS2
ADRS3
TEST_R
TEST_I0
TEST_I1
TEST_I2
TXOUTP021
TXOUTM021
TXOUTP022
TXOUTM022
TXCLKOUTP02
TXCLKOUTM02
TXOUTP023
TXOUTM023
TXOUTP030
TXOUTM030
TXOUTP031
TXOUTM031
TXOUTP032
TXOUTM032
TXCLKOUTP03
TXCLKOUTM03
TXOUTP033
TXOUTM033
TXOUTP060
TXOUTM060
TXOUTP061
TXOUTM061
TXOUTP062
TXOUTM062
TXOUTP063
TXOUTM063
TXCLKOUTP06
TXCLKOUTM06
TXOUTP070
TXOUTM070
TXOUTP071
TXOUTM071
TXOUTP072
TXOUTM072
TXOUTP073
TXOUTM073
TXCLKOUTP07
TXCLKOUTM07
J K L M N P R T U V W Y AA AB AC AD AE AF
1 2 3 4 5 6 7 8 9 10 11 12
L2DM1
L2DP1
L2DM2
L2DP2
L2CLKM
L2CLKP
L2DM3
L2DP3
AR_ADR2_LV[0:9]
L6DP3
L6DM3
L6CLKM
L6CLKP
L6DM2
L6DP2
L6DM1
L6DP1
L6DM0
L6DP0
AR XSCAN[0:20]
AR XSUS[0:10]
AR TEST[0:3]
AR ADR6_LV[0:9]
AR_ADR6_LV[0:9]
TP3324
TP3313
TP3374
TP3373
TP3375
TP3376
ST
R3309
RAB4C220J-T
R3315
0
SS
GND_D
XDRV[0:9]
V+3V_AR_LVDS
V+3V_AR_SQ
V+1V_AR_SQ
ACH1396-TRB
C3319
C3310
C3318
C3317
C3321
C3322
C3323
C3324
C3325
C3326
C3327
C3328
C3329
C3330
C3331
C3332
C3333
C3334
C3335
C3301
C3302
C3303
C3304
C3305
C3306
C3307
C3308
C3309
1.0u/6.3V
0.1/10
YB
CH
100/6.3

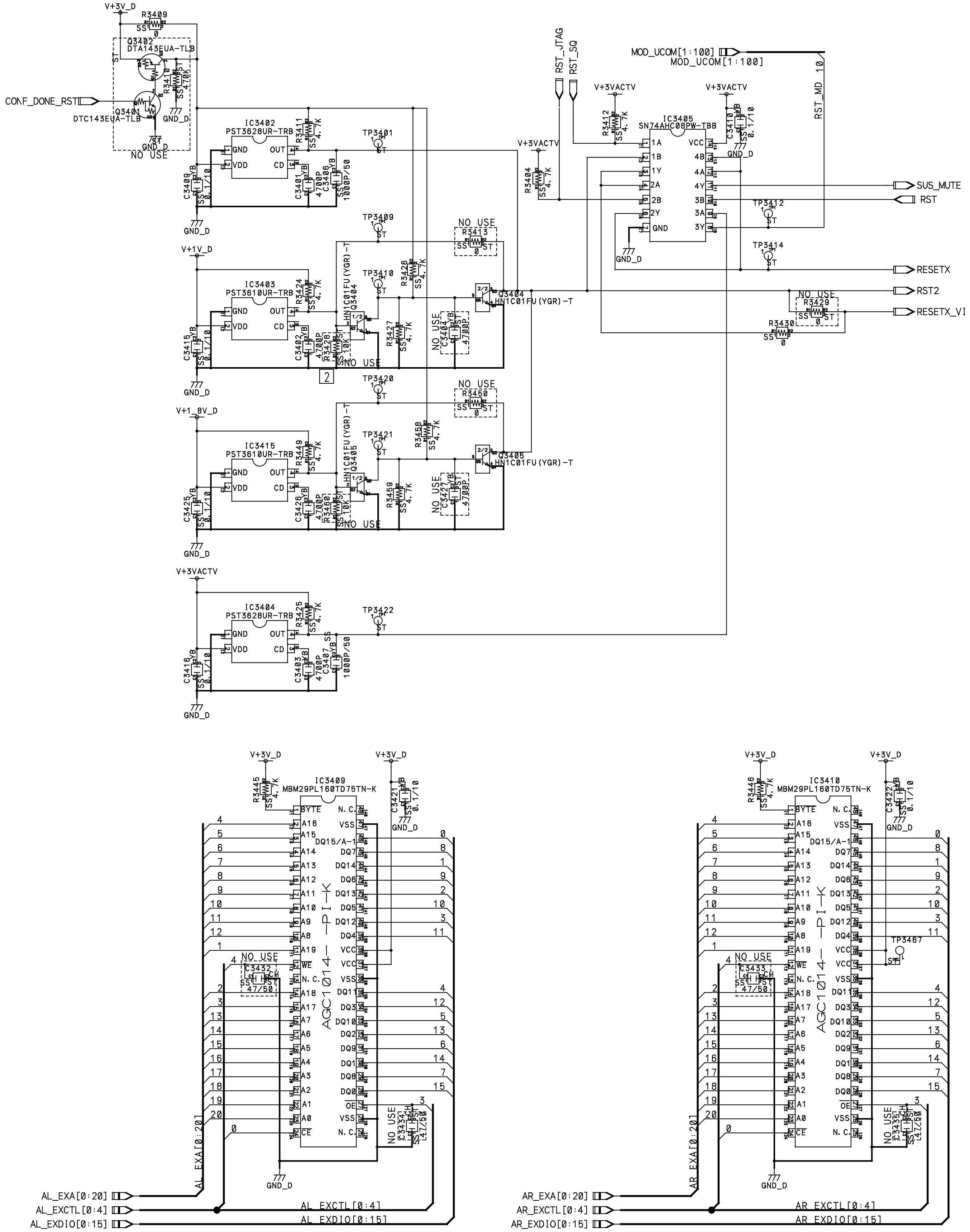
1.24 FHD DIGITAL ASSY (5/9)

FHD DIGITAL ASSY (5/9)

- ASIC FLASH BLOCK


A
B
C
D
E
F
NO USE
CN3401
AKM1232- -TBB
TCK
GND
TDI
TDO
TMS
TRST
DBI
(CON_L)
+3.3V
RST
(CON_R)
NC
UARTRXD
UARTTXD
GND
GND_D
V+3V_D
R3401
RAB4C472J-T
R3405
SS 4.7K
R3472
SS 4.7K
R3471
SS 4.7K
R3402
RAB4C101J-T
R3403
RAB4C101J-T
SDITCK
SDITDI
SDITDO
SDITMS
SDITRST_N
SDIDBI_N
5-A5
RST_JTAG
SDI[0:6]
IC3411
SN74AHC541PW-TBB
G1
A1
A2
A3
A4
A5
A6
A7
A8
GND
VCC
G2
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
C3408
0.1/10
AL_SDI[0:6]
AR_SDI[0:6]
GND_D
R3461
RAB4C472J-T
R3462
RAB4C472J-T
TP3403
TP3402
TP3404
TP3405
TP3406
TP3407
TP3408
Q3406
RN1901-T
Q3407
RN1901-T
R3473
SS 4.7K
R3474
SS 4.7K
IC3412
SN74AHC541PW-TBB
C3413
0.1/10
TP3413
TP3411
TP3415
TP3416
TP3417
TP3418
TP3419
NO USE
R3454
R3455
SS ST 0
MOD_UCOM[1:100]
AR_SEL
AL_SEL
58
52
R3456
R3457
SS 0
IC3407
TC7W126FU-TRB
IC3408
TC7W126FU-TRB
C3414
C3419
0.1/10
UARTTXD
UARTRXD
R3414
R3415
SS 0
NO USE
R3422
R3423
R3439
R3440
SS ST 0
R3438
R3432
R3441
R3433
AL_UARTRXD_VI
AL_UARTTXD_VI
AL_UARTTXD
AL_UARTRXD
AR_UARTRXD_VI
AR_UARTTXD_VI
AR_UARTTXD
AR_UARTRXD
V+3V_D
V+3V_OSC
L3401
QTL1013- -T
C3428
47/6.3
ACH1357- -TRB
MOD_UCOM[1:100]
82
Q3408
DTC143EUA-TLB
V+3V_OSC
R3431
SS 1.2K
X3401
ASS1188- -TBB
OE
VDD
GND
OUT
102.5MHz
C3423
0.1/10
CKSSYB104K10-T
C3417
0.1/10
C3405
470P
R3447
SS 10
IC3414
TC74VCX541FT-TBB
C3424
0.1/10
C3430
470P
R3436
SS 22
NO USE
R3437
SS ST 0
R3435
SS 22
C3429
470P
C3418
0.1/10
IC3401
CY25561SXC-TBB
XIN/CLK
VDD
VSS
SSCLK
XOUT
S0
S1
SSCC
R3465
R3467
R3464
SS 0
4.7K
NO USE
R3468
SS ST 0
TP3423
R3448
SS 22
IC3413
TC74VCX541FT-TBB
C3420
0.1/10
C3431
470P
R3442
R3443
R3444
R3451
R3452
R3453
SS 47
AL_CLKD
AR_CLKD
VI_CLKD
AL_CLKS
AR_CLKS
VI_CLKS
GND_D

USED	VACANT
C 3401-3435	3411-3412,
CN 3401-3401	
IC 3401-3415	3406,
L 3401-3401	
Q 3401-3407	3403,
R 3401-3474	3406-3408, 3416-3421, 3434, 3463-3464, 3469-3470,
TP 3401-3467	3424-3466,
X 3401-3401	



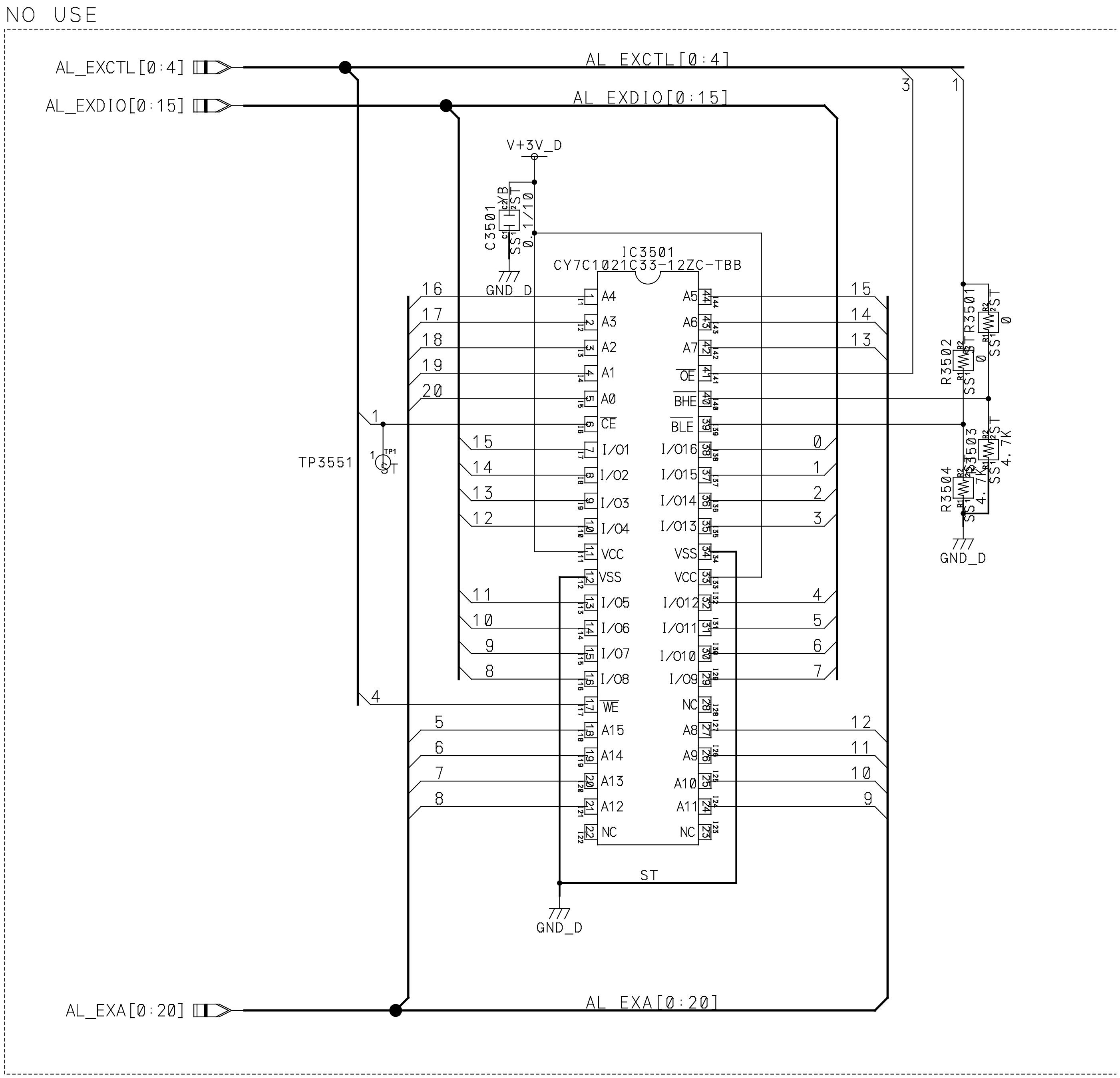
V+3V_D
R3409
SS
0
Q3402
DTA143EUA-TLB
R3410
470K
CONF_DONE_RST
Q3401
DTC143EUA-TLB
GND_D
NO USE
IC3402
PST3628UR-TRB
GND
OUT
VDD
CD
R3411
4.7K
TP3401
ST
C3409
0.1/10
C3401
4700P
C3406
1000P/50
TP3409
NO USE
R3413
V+1V_D
IC3403
PST3610UR-TRB
R3424
HN1C01FU(YGR)-T
Q3404
TP3410
R3426
R3427
C3404
4700P
C3415
C3402
R3428
10K
2
TP3420
R3450
V+1_8V_D
IC3415
PST3610UR-TRB
R3449
Q3405
TP3421
R3458
R3459
C3424
C3425
C3426
R3460
V+3VACTV
IC3404
PST3628UR-TRB
R3425
TP3422
C3416
C3403
C3407
RST_JTAG
RST_SQ
MOD_UCOM[1:100]
RST_MD 10
R3412
IC3405
SN74AHC08PW-TBB
C3410
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
R3404
SUS_MUTE
RST
TP3412
TP3414
RESETX
RST2
R3429
RESETX_VI
R3430
IC3409
MBM29PL160TD75TN-K
R3445
C3421
BYTE
N.C.
A16
VSS
A15
DQ15/A-1
A14
DQ7
A13
DQ14
A12
DQ6
A11
DQ13
A10
DQ5
A9
DQ12
A8
DQ4
A19
VCC
WE
A18
DQ11
A17
DQ3
A7
DQ10
A6
DQ2
A5
DQ9
A4
DQ1
A3
DQ8
A2
DQ0
A1
OE
A0
CE
AGC1014- -PI-K
C3432
47/50
C3431
AL_EXA[0:20]
AL_EXCTL[0:4]
AL_EXDIO[0:15]
IC3410
MBM29PL160TD75TN-K
R3446
C3422
C3433
C3435
TP3467
AR_EXA[0:20]
AR_EXCTL[0:4]
AR_EXDIO[0:15]

1.25 FHD DIGITAL ASSY (6/9)

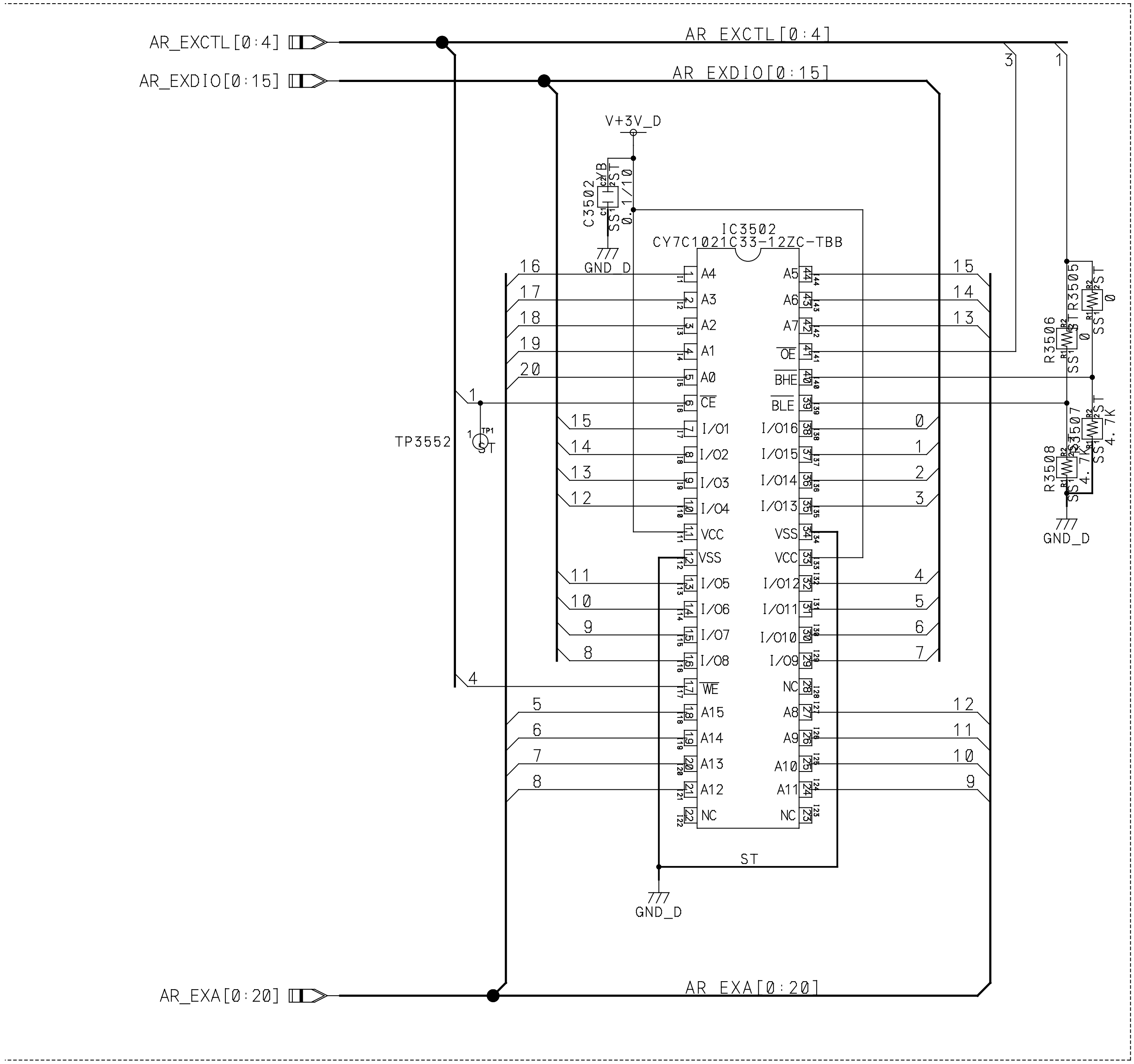
FHD DIGITAL ASSY (6/9)

• ASIC SRAM BLOCK

NO USE


NO USE
AL_EXCTL[0:4]
AL_EXDIO[0:15]
AL_EXA[0:20]
AL EXCTL[0:4]
AL EXDIO[0:15]
AL EXA[0:20]
V+3V_D
C3501
CH/B
SS1
ST
0.1/10
GND_D
IC3501
CY7C1021C33-12ZC-TBB
A4
A3
A2
A1
A0
CE
I/O1
I/O2
I/O3
I/O4
VCC
VSS
I/O5
I/O6
I/O7
I/O8
WE
A15
A14
A13
A12
NC
A5
A6
A7
OE
BHE
BLE
I/O16
I/O15
I/O14
I/O13
VSS
VCC
I/O12
I/O11
I/O10
I/O9
NC
A8
A9
A10
A11
NC
TP3551
TP1
ST
R3501
ST
0
R3502
SS1
0
R3503
ST
4.7K
R3504
SS1
4.7K
GND_D
ST
GND_D

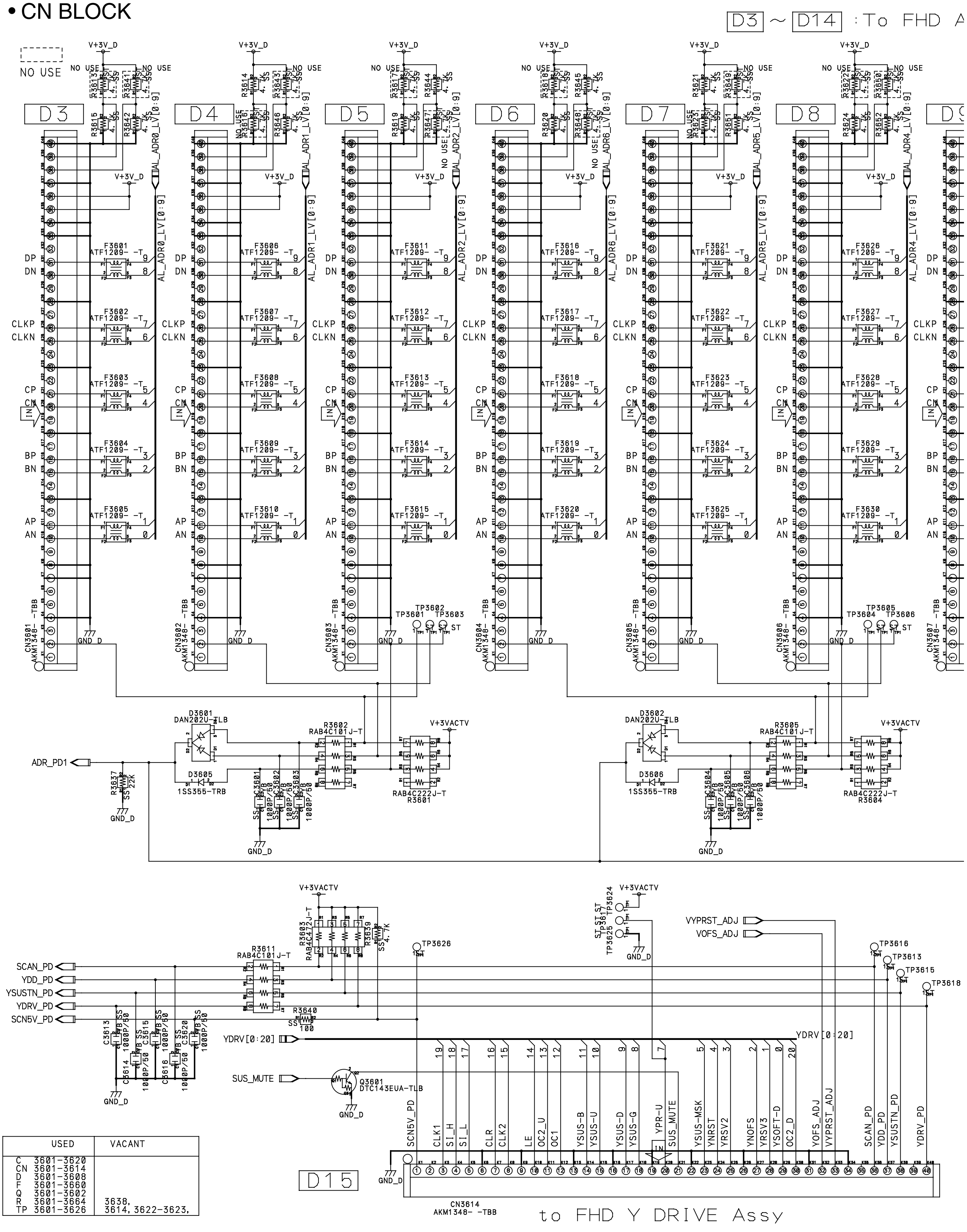
USED	VACANT
C 3501-3502 IC 3501-3502 R 3501-3508 TP 3551-3552	


AR_EXCTL[0:4]
AR_EXDIO[0:15]
AR_EXCTL[0:4]
AR_EXDIO[0:15]
3
1
V+3V_D
C3502
CH/B
SS1
ST
0.1/10
GND_D
IC3502
CY7C1021C33-12ZC-TBB
A4
A3
A2
A1
A0
CE
I/O1
I/O2
I/O3
I/O4
VCC
VSS
I/O5
I/O6
I/O7
I/O8
WE
A15
A14
A13
A12
NC
A5
A6
A7
OE
BHE
BLE
I/O16
I/O15
I/O14
I/O13
VSS
VCC
I/O12
I/O11
I/O10
I/O9
NC
A8
A9
A10
A11
NC
R3505
0
R3506
0
R3507
4.7K
R3508
4.7K
SS1
ST
GND_D
TP3552
TP1
ST
ST
GND_D
AR_EXA[0:20]
AR_EXA[0:20]

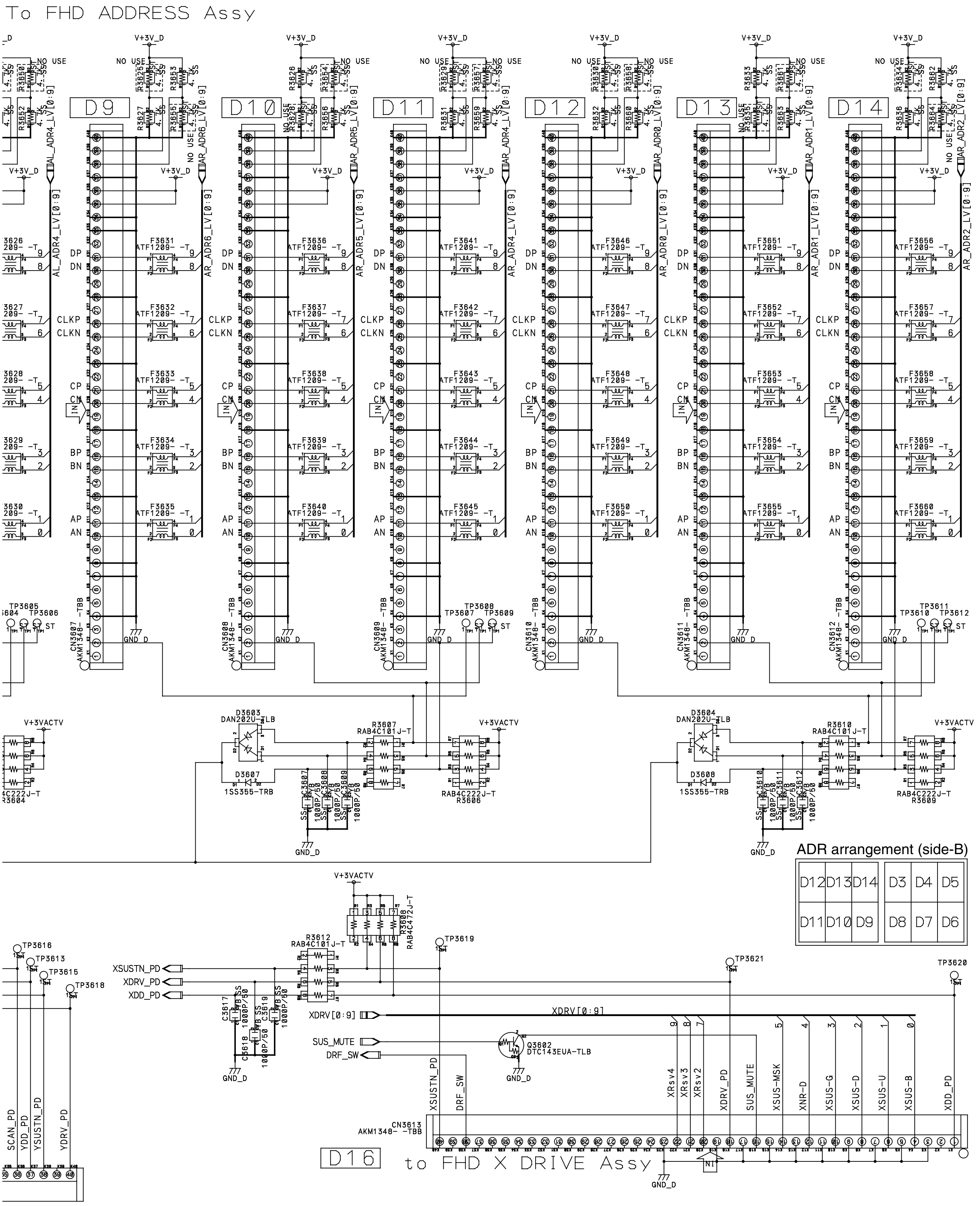
1.26 FHD DIGITAL ASSY (7/9)

FHD DIGITAL ASSY (7/9)

- CN BLOCK


D3 ~ D14 : To FHD A
NO USE
D3
D4
D5
D6
D7
D8
D9
V+3V_D
R3613
R3641
R3615
R3642
R3614
R3643
R3616
R3646
R3617
R3644
R3619
R3647
R3618
R3645
R3620
R3648
R3621
R3649
R3623
R3651
R3622
R3650
R3624
R3652
4.7K
AL_ADR0_LV[0:9]
AL_ADR1_LV[0:9]
AL_ADR2_LV[0:9]
AL_ADR6_LV[0:9]
AL_ADR5_LV[0:9]
AL_ADR4_LV[0:9]
DP
DN
CLKP
CLKN
CP
CN
BP
BN
AP
AN
IN
F3601 ATF1209- -T
F3602 ATF1209- -T
F3603 ATF1209- -T
F3604 ATF1209- -T
F3605 ATF1209- -T
F3606
F3607
F3608
F3609
F3610
F3611
F3612
F3613
F3614
F3615
F3616
F3617
F3618
F3619
F3620
F3621
F3622
F3623
F3624
F3625
F3626
F3627
F3628
F3629
F3630
CN3601 AKM1348- -TBB
CN3602 AKM1348- -TBB
CN3603 AKM1348- -TBB
CN3604 AKM1348- -TBB
CN3605 AKM1348- -TBB
CN3606 AKM1348- -TBB
CN3607 AKM1348-
GND_D
TP3601
TP3602
TP3603
TP3604
TP3605
TP3606
ST
D3601 DAN202U-TLB
D3605 1SS355-TRB
D3602 DAN202U-TLB
D3606 1SS355-TRB
R3602 RAB4C101J-T
R3601 RAB4C222J-T
R3605 RAB4C101J-T
R3604 RAB4C222J-T
V+3VACTV
ADR_PD1
R3637 22K
C3601 1000P/50
C3602 1000P/50
C3603 1000P/50
C3604 1000P/50
C3605 1000P/50
C3606 1000P/50
R3603 RAB4C472J-T
R3639 4.7K
R3611 RAB4C101J-T
R3640 100
TP3626
TP3624
TP3617
TP3625
VYPRST_ADJ
VOFS_ADJ
TP3616
TP3613
TP3615
TP3618
SCAN_PD
YDD_PD
YSUSTN_PD
YDRV_PD
SCN5V_PD
C3613 1000P/50
C3614 1000P/50
C3615 1000P/50
C3616 1000P/50
C3620 1000P/50
YDRV[0:20]
SUS_MUTE
Q3601 DTC143EUA-TLB
SCN5V_PD
CLK1
SI_H
SI_L
CLR
CLK2
LE
OC2_U
OC1
YSUS-B
YSUS-U
YSUS-D
YSUS-G
YPR-U
SUS_MUTE
YSUS-MSK
YNRST
YRSV2
YNOFS
YRSV3
YSOFT-D
OC2_D
YOFS_ADJ
VYPRST_ADJ
SCAN_PD
YDD_PD
YSUSTN_PD
YDRV_PD
D15
CN3614 AKM1348- -TBB
to FHD Y DRIVE Assy

USED	VACANT
C 3601-3620	
CN 3601-3614	
D 3601-3608	
F 3601-3660	
Q 3601-3602	
R 3601-3664	3638,
TP 3601-3626	3614, 3622-3623,


To FHD ADDRESS Assy
D9
D10
D11
D12
D13
D14
V+3V_D
NO USE
R3625
R3626
R3627
R3628
R3629
R3630
R3631
R3632
R3633
R3634
R3635
R3636
R3650
R3651
R3652
R3653
R3654
R3655
R3656
R3657
R3658
R3659
R3660
R3661
R3662
R3663
R3664
4.7k
AL_ADR4_LV[0:9]
AR_ADR6_LV[0:9]
AR_ADR5_LV[0:9]
AR_ADR4_LV[0:9]
AR_ADR0_LV[0:9]
AR_ADR1_LV[0:9]
AR_ADR2_LV[0:9]
DP
DN
CLKP
CLKN
CP
CN
BP
BN
AP
AN
IN
F3631
F3632
F3633
F3634
F3635
F3636
F3637
F3638
F3639
F3640
F3641
F3642
F3643
F3644
F3645
F3646
F3647
F3648
F3649
F3650
F3651
F3652
F3653
F3654
F3655
F3656
F3657
F3658
F3659
F3660
ATF1209- -T
CN3607
CN3608
CN3609
CN3610
CN3611
CN3612
AKM1348- -TBB
GND_D
TP3605
TP3606
TP3607
TP3608
TP3609
TP3610
TP3611
TP3612
ST
V+3VACTV
D3603
D3604
DAN202U-TLB
D3607
D3608
1SS355-TRB
R3607
R3610
RAB4C101J-T
R3604
R3606
R3609
RAB4C222J-T
C3607
C3608
C3609
C3610
C3611
C3612
1000P/50
CH
SS
R3612
RAB4C101J-T
R3608
RAB4C472J-T
TP3613
TP3615
TP3616
TP3618
TP3619
TP3620
TP3621
XSUSTN_PD
XDRV_PD
XDD_PD
C3617
C3618
C3619
XDRV[0:9]
SUS_MUTE
DRF_SW
Q3602
DTC143EUA-TLB
SCAN_PD
YDD_PD
YSUSTN_PD
YDRV_PD
XRsv4
XRsv3
XRsv2
XSUS-MSK
XNR-D
XSUS-G
XSUS-D
XSUS-U
XSUS-B
CN3613
AKM1348- -TBB
D16
to FHD X DRIVE Assy
N1

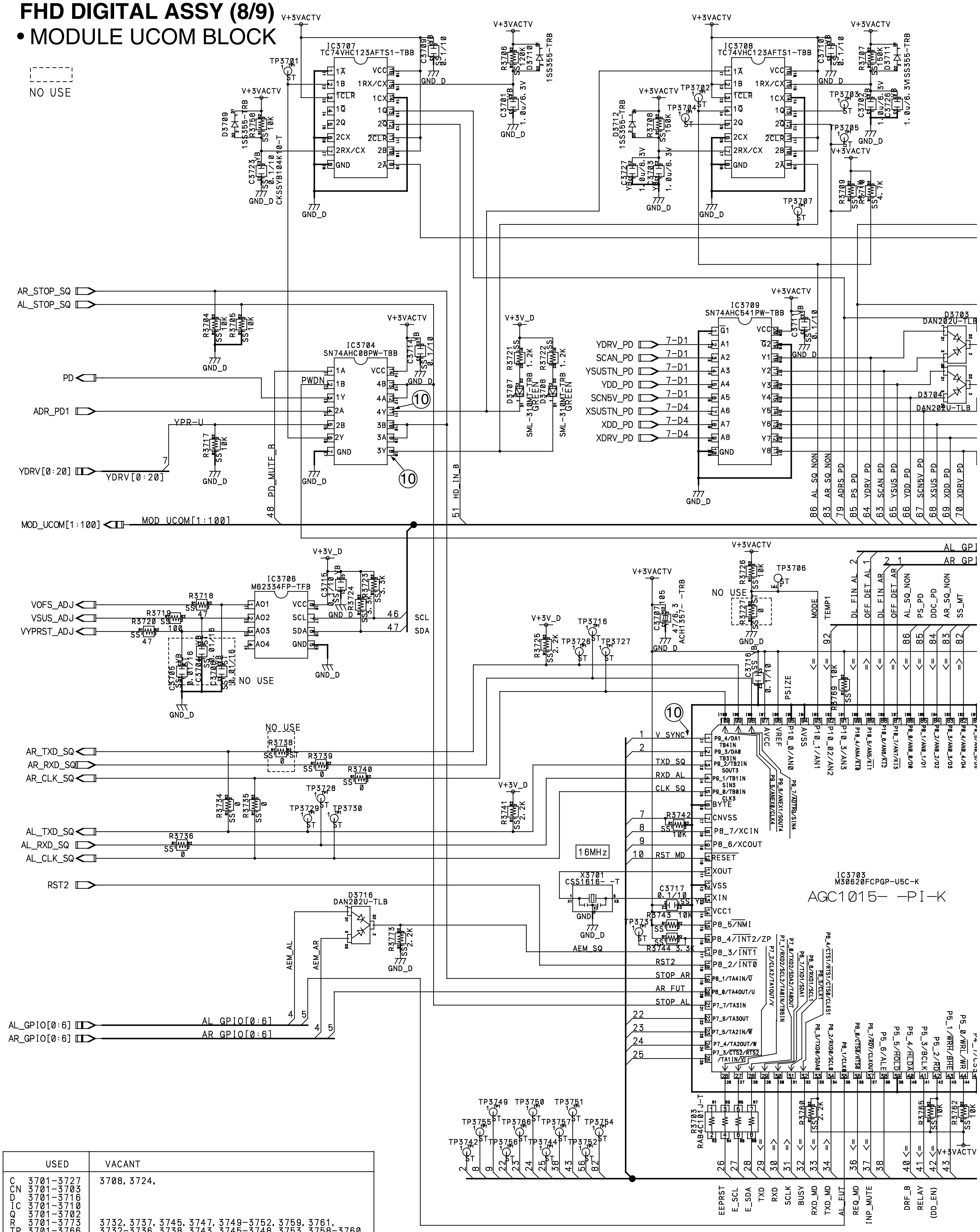
ADR arrangement (side-B)

D12	D13	D14	D3	D4	D5
D11	D10	D9	D8	D7	D6

1.27 FHD DIGITAL ASSY (8/9)

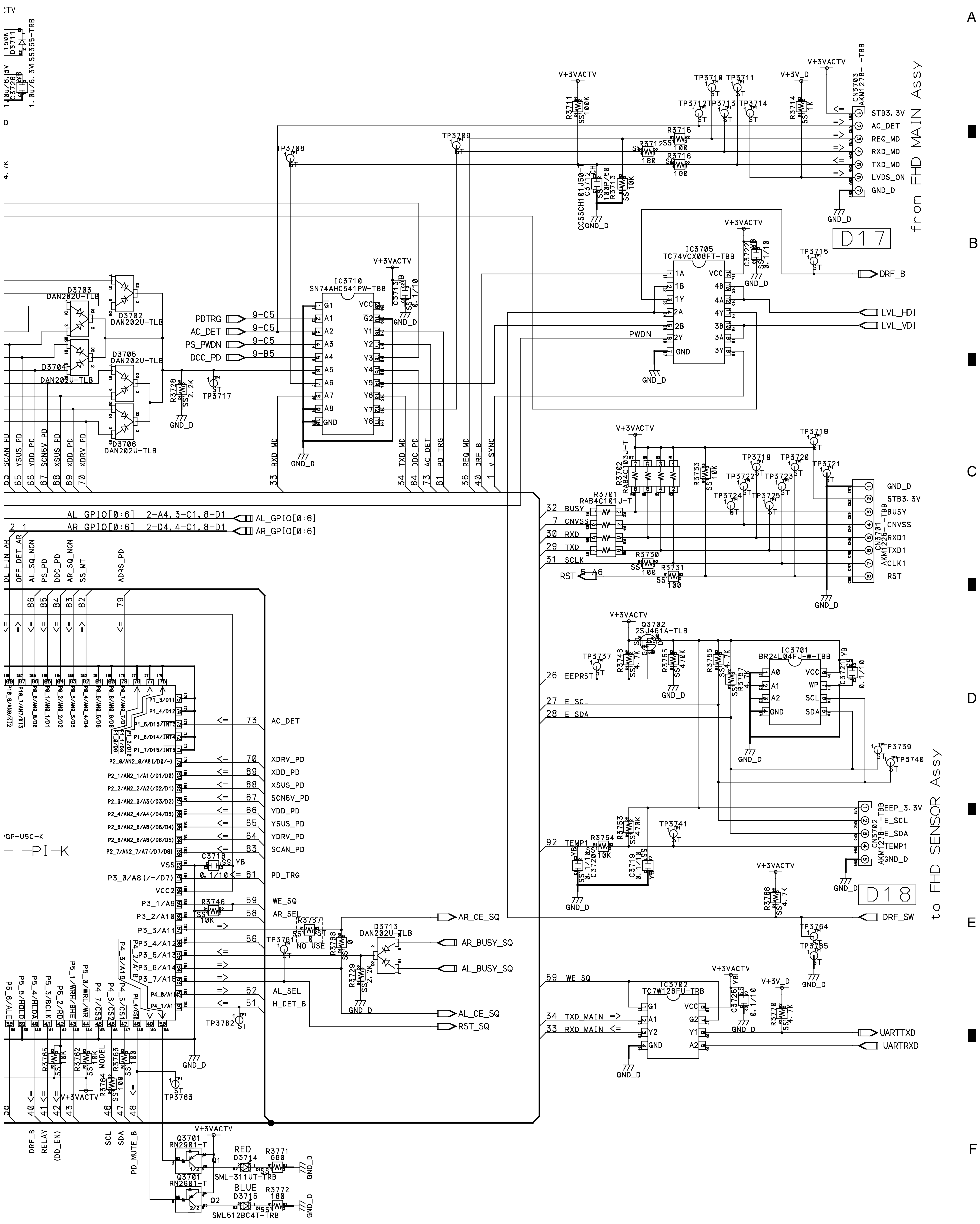
FHD DIGITAL ASSY (8/9)

- MODULE UCOM BLOCK



NO USE
IC3707
TC74VHC123AFTS1-TBB
IC3708
TC74VHC123AFTS1-TBB
IC3704
SN74AHC08PW-TBB
IC3709
SN74AHC541PW-TBB
IC3706
M62334FP-TFB
IC3703
M30620FCPGP-U5C-K
AGC1015- -PI-K
X3701
CSS1616- -T
16MHz
D3716
DAN202U-TLB
D3703
DAN202U-TLB
D3704
DAN202U-TLB
D3707
SML-310MT-TRB
D3708
SML-310MT-TRB
D3709
1SS355-TRB
D3710
1SS355-TRB
D3711
1SS355-TRB
D3712
1SS355-TRB
R3703
RAB4C101J-T
V+3VACTV
V+3V_D
GND_D
AR_STOP_SQ
AL_STOP_SQ
PD
ADR_PD1
YDRV[0:20]
MOD_UCOM[1:100]
VOFS_ADJ
VSUS_ADJ
VYPRST_ADJ
AR_TXD_SQ
AR_RXD_SQ
AR_CLK_SQ
AL_TXD_SQ
AL_RXD_SQ
AL_CLK_SQ
RST2
AL_GPIO[0:6]
AR_GPIO[0:6]
YDRV_PD
SCAN_PD
YSUSTN_PD
YDD_PD
SCN5V_PD
XSUSTN_PD
XDD_PD
XDRV_PD
PD_MUTE_B
HD_IN_B
PWDN
YPR-U
SCL
SDA
AEM_AL
AEM_AR
AEM_SQ
V_SYNC
TXD_SQ
RXD_AL
CLK_SQ
RST_MD
STOP_AR
AR_FUT
STOP_AL
AL_SQ_NON
AR_SQ_NON
ADRS_PD
PS_PD
YDRV_PD
SCAN_PD
YSUS_PD
YDD_PD
SCN5V_PD
XSUS_PD
XDD_PD
XDRV_PD
AL_GPI
AR_GPI
MODE
TEMP1
DL_FIN_AL
OFF_DET_AL
DL_FIN_AR
OFF_DET_AR
AL_SQ_NON
PS_PD
DDC_PD
AR_SQ_NON
SS_MT
PSIZE
EEPRST
E_SCL
E_SDA
TXD
RXD
SCLK
BUSY
RXD_MD
TXD_MD
AL_FUT
REQ_MD
INP_MUTE
DRF_B
RELAY
(DD_EN)
⑩

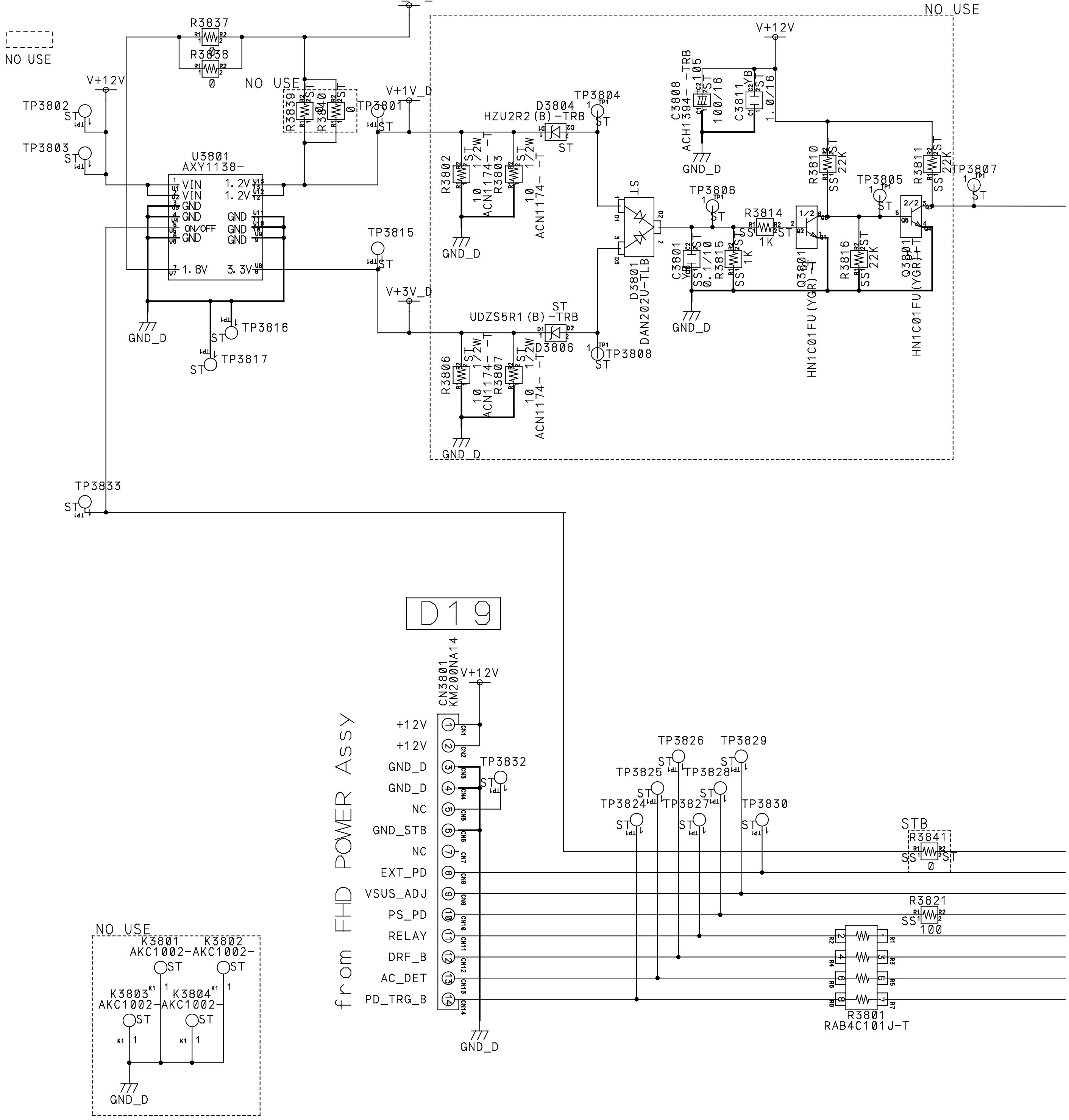
USED	VACANT
C 3701-3727	3708, 3724,
CN 3701-3703	
D 3701-3716	
IC 3701-3710	
Q 3701-3702	
R 3701-3773	3732, 3737, 3745, 3747, 3749-3752, 3759, 3761,
TP 3701-3766	3732-3736, 3738, 3743, 3745-3748, 3753, 3758-3760,
X 3701-3701	


A
B
C
D
E
F
D17
D18
from FHD MAIN Assy
to FHD SENSOR Assy
CN3703 AKM1278- -TBB
STB3.3V
AC_DET
REQ_MD
RXD_MD
TXD_MD
LVDS_ON
GND_D
V+3VACTV
V+3V_D
R3711 SS 100K
R3714 SS 1K
R3715 SS 100
R3716 SS 180
R3712 SS 180
R3713 SS 10K
C3712 CCSSCH101J50-CH 100P/50
TP3708
TP3709
TP3710
TP3711
TP3712
TP3713
TP3714
TP3715
IC3705 TC74VCX08FT-TBB
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
C3722 SS 0.1/10
DRF_B
LVL_HDI
LVL_VDI
PWDN
IC3710 SN74AHC541PW-TBB
G1
A1
A2
A3
A4
A5
A6
A7
A8
G2
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
C3713 SS 0.1/10
PDTRG 9-C5
AC_DET 9-C5
PS_PWDN 9-C5
DCC_PD 9-B5
R3728 SS 2.2K
TP3717
D3702 DAN202U-TLB
D3703 DAN202U-TLB
D3704 DAN202U-TLB
D3705 DAN202U-TLB
D3706 DAN202U-TLB
D3711 1SS355-TRB
C3726 1.0u/6.3V
65 YSUS_PD
66 YDD_PD
67 SCN5V_PD
68 XSUS_PD
69 XDD_PD
70 XDRV_PD
33 RXD_MD
34 TXD_MD
84 DDC_PD
73 AC_DET
61 PD_TRG
36 REQ_MD
40 DRF_B
1 V_SYNC
AL_GPIO[0:6] 2-A4,3-C1,8-D1
AR_GPIO[0:6] 2-D4,4-C1,8-D1
DL_FIN_AR
OFF_DET_AR
AL_SQ_NON
PS_PD
DDC_PD
AR_SQ_NON
SS_MT
ADRS_PD
86 85 84 83 82 79
P2_0/AN2_0/A0(/D0/-)
P2_1/AN2_1/A1(/D1/D0)
P2_2/AN2_2/A2(/D2/D1)
P2_3/AN2_3/A3(/D3/D2)
P2_4/AN2_4/A4(/D4/D3)
P2_5/AN2_5/A5(/D5/D4)
P2_6/AN2_6/A6(/D6/D5)
P2_7/AN2_7/A7(/D7/D6)
VSS
P3_0/A8(/-/D7)
VCC2
P3_1/A9
P3_2/A10
P3_3/A11
P3_4/A12
P3_5/A13
P3_6/A14
P3_7/A15
P4_0/A16
P4_1/A17
P4_2/A18
P4_3/A19
P1_3/D11
P1_4/D12
P1_5/D13/INT3
P1_6/D14/INT4
P1_7/D15/INT5
P1_0/D8
P1_2/D10
73 AC_DET
70 XDRV_PD
69 XDD_PD
68 XSUS_PD
67 SCN5V_PD
66 YDD_PD
65 YSUS_PD
64 YDRV_PD
63 SCAN_PD
61 PD_TRG
59 WE_SQ
58 AR_SEL
56
52 AL_SEL
51 H_DET_B
C3718 SS YB 0.1/10
R3746 SS 10K
R3767 SS 0 NO USE
R3768 SS 0
R3729 SS 2.2K
TP3761
TP3762
TP3763
D3713 DAN202U-TLB
AR_CE_SQ
AR_BUSY_SQ
AL_BUSY_SQ
AL_CE_SQ
RST_SQ
GND_D
PGP-U5C-K
PI-K
P5_6/ALE
P5_5/HOLD
P5_4/HLDA
P5_3/BCLK
P5_2/RD
P5_1/WRH/BHE
P5_0/WRL/WR
P4_7/CS3
P4_6/CS2
P4_5/CS1
R3765 SS 10K
R3762 SS 10K
R3764 SS 100 MODEL
R3763 SS 100
40 DRF_B
41 RELAY (DD_EN)
42 V+3VACTV
43
46 SCL
47 SDA
48 PD_MUTE_B
Q3701 RN2901-T Q1
Q3701 RN2901-T Q2
RED D3714 SML-311UT-TRB
BLUE D3715 SML512BC4T-TRB
R3771 SS 680
R3772 SS 180
R3701 RAB4C101J-T
R3702 RAB4C103J-T
R3733 SS 10K
R3730 SS 100
R3731 SS 100
32 BUSY
7 CNVSS
30 RXD
29 TXD
31 SCLK
RST 5-A6
TP3718
TP3719
TP3720
TP3721
TP3722
TP3723
TP3724
TP3725
CN3701 AKM1225- -TBB
GND_D
STB3.3V
BUSY
CNVSS
RXD1
TXD1
CLK1
RST
Q3702 2SJ461A-TLB
TP3737
R3748 SS 4.7K
R3755 SS 470K
R3756 SS 4.7K
R3757 SS 4.7K
IC3701 BR24L04FJ-W-TBB
A0
A1
A2
GND
VCC
WP
SCL
SDA
C3721 SS YB 0.1/10
26 EEPRST
27 E_SCL
28 E_SDA
TP3739
TP3740
92 TEMP1
R3754 SS 10K
R3753 SS 470K
TP3741
C3720 SS YB 0.1/10
C3719 SS YB 0.1/10
CN3702 AKM1278- -TBB
EEP_3.3V
E_SCL
E_SDA
TEMP1
GND_D
R3766 SS 4.7K
DRF_SW
TP3764
TP3765
59 WE_SQ
34 TXD_MAIN
33 RXD_MAIN
IC3702 TC7W126FU-TRB
G1
A1
Y2
GND
VCC
G2
Y1
A2
C3725 SS YB 0.1/10
R3770 SS 4.7K
UARTTXD
UARTRXD

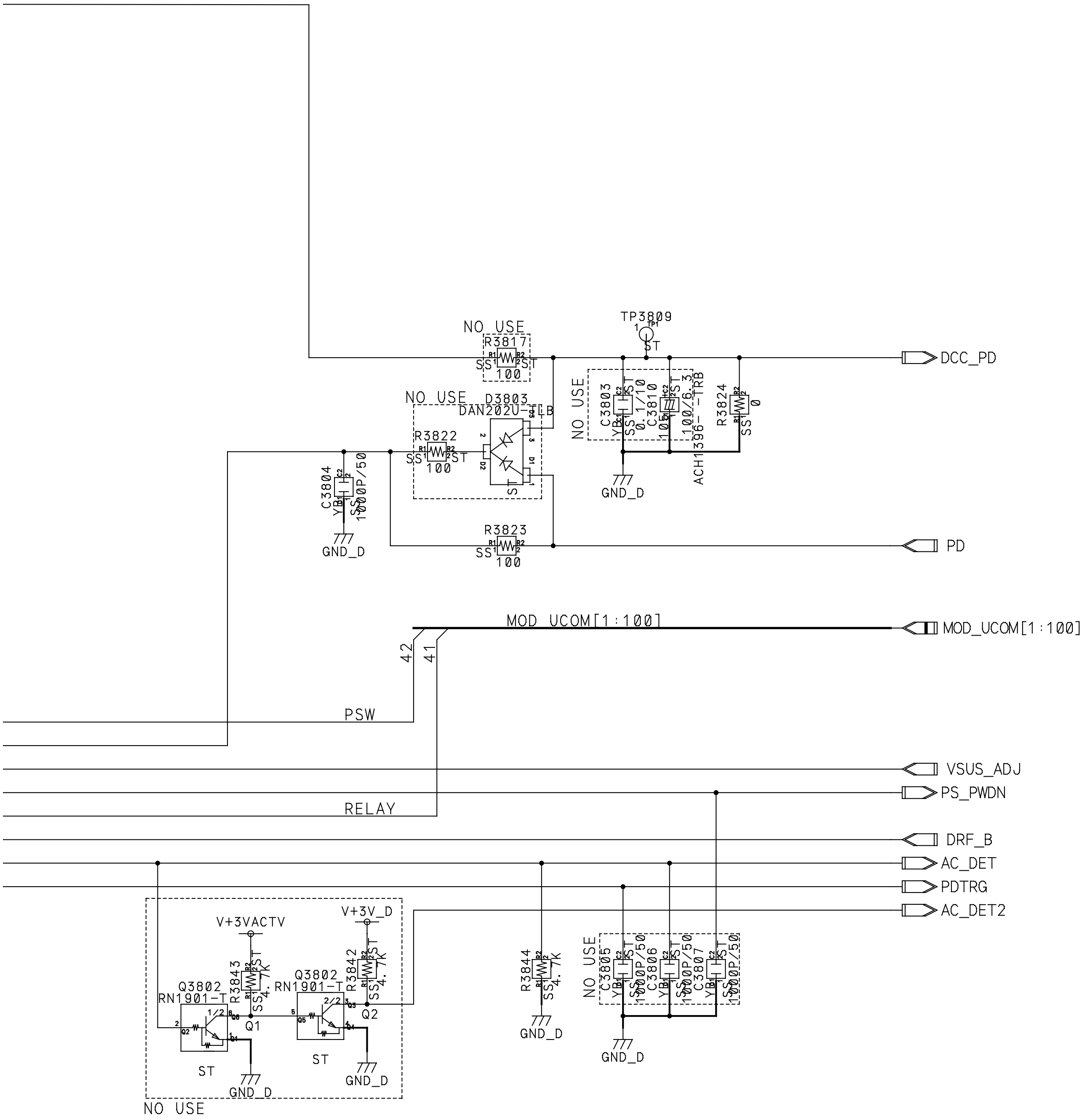
1.28 FHD DIGITAL ASSY (9/9)

FHD DIGITAL ASSY (9/9)

- DIGITAL DD CON BLOCK

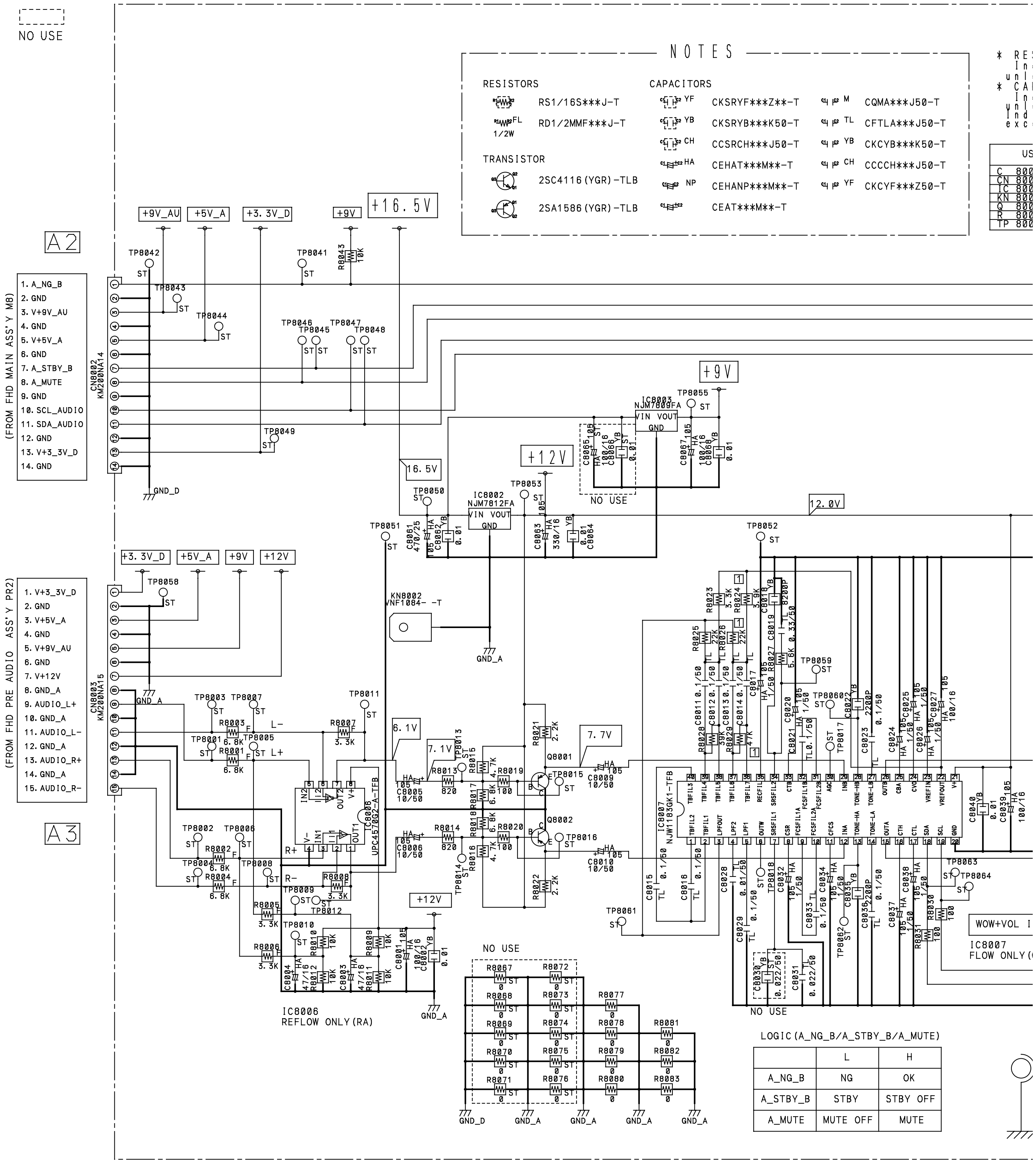

V+1_8V_D
NO USE
R3837
R3838
0
V+12V
NO USE
R3839
R3840
0
V+1V_D
TP3801
TP3802
TP3803
U3801
AXY1138-
VIN
1.2V
GND
ON/OFF
1.8V
3.3V
GND_D
TP3815
TP3816
TP3817
V+3V_D
D3804
HZU2R2(B)-TRB
TP3804
R3802
R3803
10
1/2W
ACN1174- -T
UDZS5R1(B)-TRB
D3806
TP3808
R3806
R3807
D3801
DAN202U-TLB
V+12V
C3808
ACH1394- -TRB
105
100/16
C3811
YB
1.0/16
TP3806
R3814
1K
C3801
0.1/10
R3815
1K
R3810
22K
R3816
22K
TP3805
R3811
22K
TP3807
Q3801
HN1C01FU(YGR)-T
TP3833
D19
CN3801
KM200NA14
V+12V
from FHD POWER Assy
+12V
+12V
GND_D
GND_D
NC
GND_STB
NC
EXT_PD
VSUS_ADJ
PS_PD
RELAY
DRF_B
AC_DET
PD_TRG_B
TP3832
TP3824
TP3825
TP3826
TP3827
TP3828
TP3829
TP3830
STB
R3841
0
R3821
100
R3801
RAB4C101J-T
NO USE
K3801
K3802
AKC1002-
K3803
K3804
AKC1002-
GND_D

USED	VACANT
C 3801-3811	3802, 3809,
CN 3801-3801	
D 3801-3806	3802, 3805,
K 3801-3804	
Q 3801-3802	
R 3801-3844	3804-3805, 3808-3809, 3812-3813, 3818-3820, 3825-3836,
TP 3801-3833	3810-3814, 3818-3823, 3831,
U 3801-3801	


NO USE
R3817
SS
ST
100
TP3809
ST
DCC_PD
NO USE
D3803
DAN202U-TLB
R3822
SS
ST
100
NO USE
C3803
YB
SS
0.1/10
C3810
10
ST
100/6.3
ACH1396- -TRB
R3824
SS
0
GND_D
C3804
YB
SS
1000P/50
GND_D
R3823
SS
100
PD
MOD_UCOM[1:100]
42
41
MOD_UCOM[1:100]
PSW
VSUS_ADJ
PS_PWDN
RELAY
DRF_B
AC_DET
PDTRG
AC_DET2
V+3VACTV
V+3V_D
R3843
SS
ST
4.7K
Q3802
RN1901-T
Q1
ST
GND_D
Q3802
RN1901-T
R3842
SS
ST
4.7K
Q2
ST
GND_D
NO USE
R3844
SS
4.7K
GND_D
NO USE
C3805
YB
SS
1000P/50
C3806
YB
SS
1000P/50
C3807
YB
SS
1000P/50
ST
GND_D

1.29 FHD POWER AMP ASSY

FHD POWER AMP ASSY


NO USE
A2
A3
CN8002 KM200NA14
(FROM FHD MAIN ASS'Y M8)
1. A_NG_B
2. GND
3. V+9V_AU
4. GND
5. V+5V_A
6. GND
7. A_STBY_B
8. A_MUTE
9. GND
10. SCL_AUDIO
11. SDA_AUDIO
12. GND
13. V+3_3V_D
14. GND
CN8003 KM200NA15
(FROM FHD PRE AUDIO ASS'Y PR2)
1. V+3_3V_D
2. GND
3. V+5V_A
4. GND
5. V+9V_AU
6. GND
7. V+12V
8. GND_A
9. AUDIO_L+
10. GND_A
11. AUDIO_L-
12. GND_A
13. AUDIO_R+
14. GND_A
15. AUDIO_R-
+9V_AU
+5V_A
+3.3V_D
+9V
+16.5V
+12V
16.5V
12.0V
6.1V
7.1V
7.7V
IC8003 NJM7809FA
IC8002 NJM7812FA
IC8006 UPC4570G2-A-TFB
IC8007 NJW1183GK1-TFB
Q8001
Q8002
KN8002 VNF1084- -T
GND_A
GND_D
IC8006 REFLOW ONLY (RA)
IC8007 FLOW ONLY
WOW+VOL
NO USE

NOTES

RESISTORS

RS1/16S***J-T

FL 1/2W RD1/2MMF***J-T

TRANSISTOR

2SC4116(YGR)-TLB

2SA1586(YGR)-TLB

CAPACITORS

YF CKSRYF***Z**-T

YB CKSRYB***K50-T

CH CCSRCH***J50-T

HA CEHAT***M**-T

NP CEHANP***M**-T

CEAT***M**-T

M CQMA***J50-T

TL CFTLA***J50-T

YB CKCYB***K50-T

CH CCCCH***J50-T

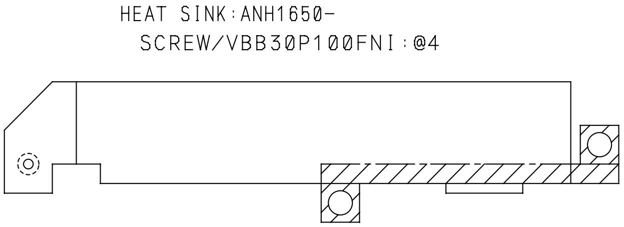
YF CKCYF***Z50-T

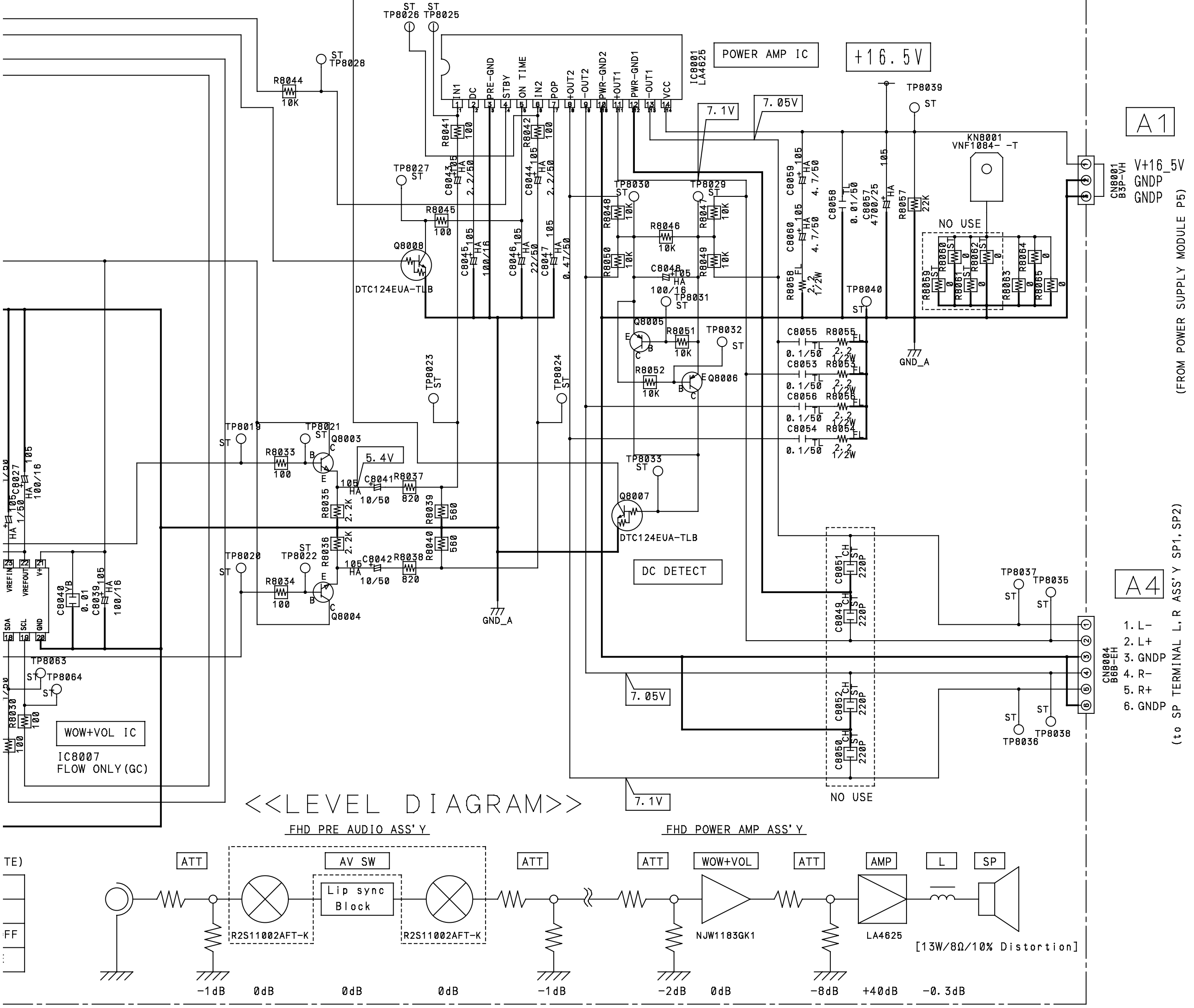
LOGIC (A_NG_B/A_STBY_B/A_MUTE)

	L	H
A_NG_B	NG	OK
A_STBY_B	STBY	STBY OFF
A_MUTE	MUTE OFF	MUTE

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance unless otherwise noted, k : kΩ, M : MΩ.
* CAPACITORS
Indicated in Capacity(μF)/Voltage(V) unless otherwise noted. p : pF
Indication without voltage is 50V except electrolytic capacitor.

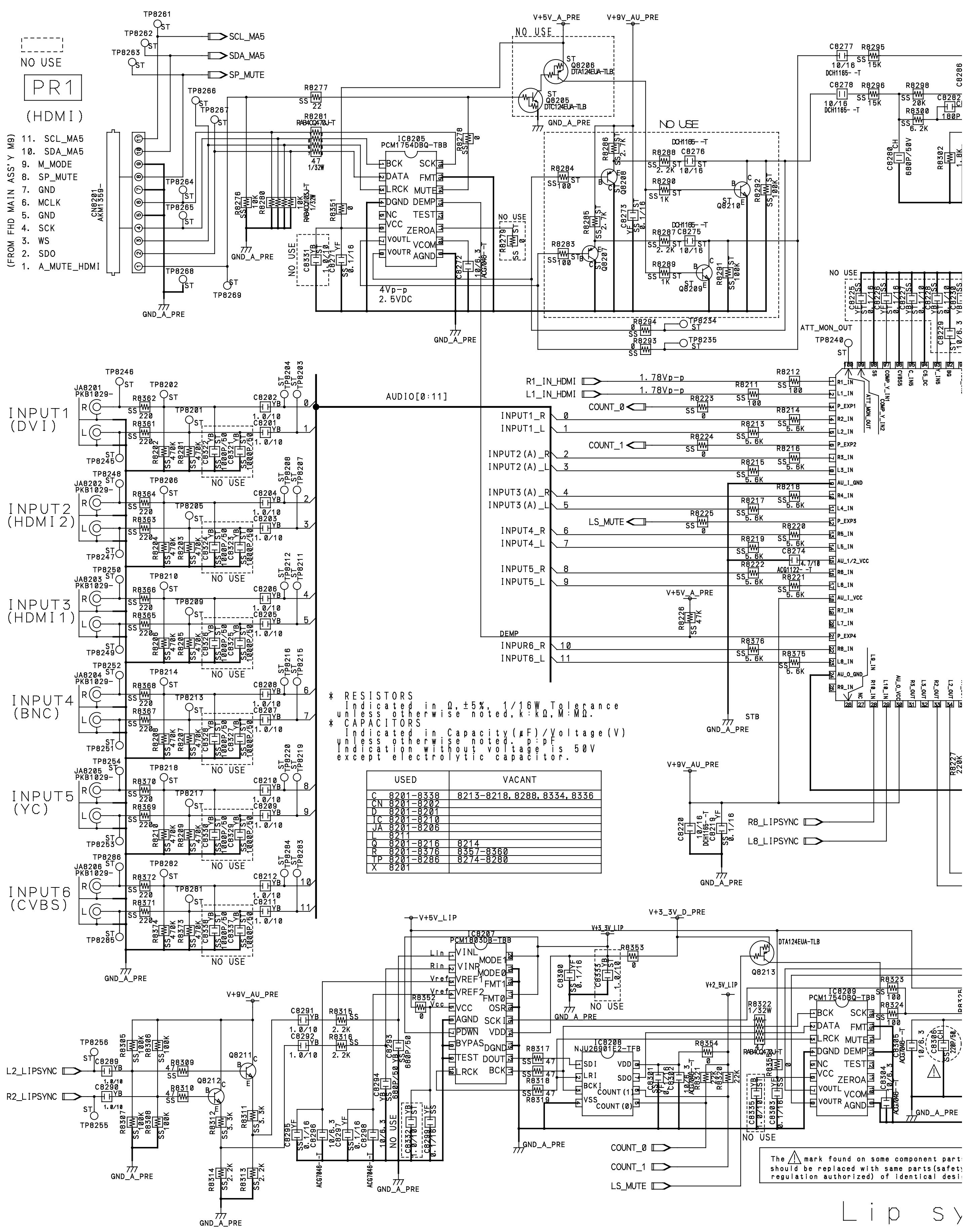
USED	VACANT
C 8001-8068	8007-8008
CN 8001-8004	
IC 8001-8007	8004-8005
KN 8001-8002	
Q 8001-8008	
R 8001-8081	8032, 8066
TP 8001-8064	8034, 8054, 8056-8057


HEAT SINK : ANH1650-
SCREW/VBB30P100FNI : @4


0-T
50-T
50-T
50-T
50-T
ST TP8026
ST TP8025
ST TP8028
R8044 10K
IC8001 LA4625
POWER AMP IC
IN1
DC
PRE-GND
STBY
ON TIME
IN2
POP
+OUT2
-OUT2
PWR-GND2
+OUT1
PWR-GND1
-OUT1
VCC
1 2 3 4 5 6 7 8 9 10 11 12 13 14
+16.5V
7.1V
7.05V
TP8039 ST
A1
KN8001 VNF1084- -T
CN8001 B3P-VH
V+16_5V
GNDP
GNDP
(FROM POWER SUPPLY MODULE P5)
R8041 100
C8043 105 HA 2.2/50
R8042 100
C8044 105 HA 2.2/50
TP8027 ST
R8045 100
Q8008
DTC124EUA-TLB
C8045 105 HA 100/16
C8046 105 HA 22/50
C8047 105 HA 0.47/50
TP8030 ST
TP8029 ST
R8048 10K
R8047 10K
R8046 10K
R8050 10K
R8049 10K
C8048 105 HA 100/16
TP8031 ST
C8059 105 HA 4.7/50
C8060 105 HA 4.7/50
R8058 FL 2.2 1/2W
C8058 TL 0.01/50
C8057 105 HA 4700/25
R8057 22K
NO USE
R8059 ST 0
R8060 ST 0
R8061 ST 0
R8062 ST 0
R8063 0
R8064 0
R8065 0
TP8040 ST
GND_A
Q8005
R8051 10K
TP8032 ST
R8052 10K
Q8006
E B C
C8055 TL 0.1/50 R8055 FL 2.2 1/2W
C8053 TL 0.1/50 R8053 FL 2.2 1/2W
C8056 TL 0.1/50 R8056 FL 2.2 1/2W
C8054 TL 0.1/50 R8054 FL 2.2 1/2W
TP8023 ST
TP8024 ST
TP8019 ST
TP8021 ST
Q8003
R8033 100
5.4V
C8041 105 HA 10/50
R8037 820
R8035 2.2K
R8039 560
R8036 2.2K
R8040 560
TP8020 ST
TP8022 ST
C8042 105 HA 10/50
R8038 820
R8034 100
Q8004
GND_A
C8027 105 HA 1/50
105 HA 100/16
VREFIN VREFOUT V+
23 22 21
C8040 YB 0.01
C8039 105 HA 100/16
SDA SCL GND
18 19 20
TP8063 ST
TP8064 ST
R8030 100
100
WOW+VOL IC
IC8007
FLOW ONLY(GC)
TP8033 ST
Q8007
DTC124EUA-TLB
DC DETECT
C8051 CH ST 220P
C8049 CH ST 220P
C8052 CH ST 220P
C8050 CH ST 220P
NO USE
7.05V
7.1V
TP8037 ST
TP8035 ST
TP8036 ST
TP8038 ST
A4
CN8004 B6B-EH
1. L-
2. L+
3. GNDP
4. R-
5. R+
6. GNDP
(to SP TERMINAL L,R ASS'Y SP1, SP2)
<<LEVEL DIAGRAM>>
FHD PRE AUDIO ASS'Y
FHD POWER AMP ASS'Y
TE)
FF
ATT
AV SW
Lip sync Block
R2S11002AFT-K
R2S11002AFT-K
ATT
ATT
WOW+VOL
NJW1183GK1
ATT
AMP
LA4625
L
SP
[13W/8Ω/10% Distortion]
-1dB
0dB
0dB
0dB
-1dB
-2dB
0dB
-8dB
+40dB
-0.3dB

1.30 FHD PRE AUDIO ASSY

FHD PRE AUDIO ASSY

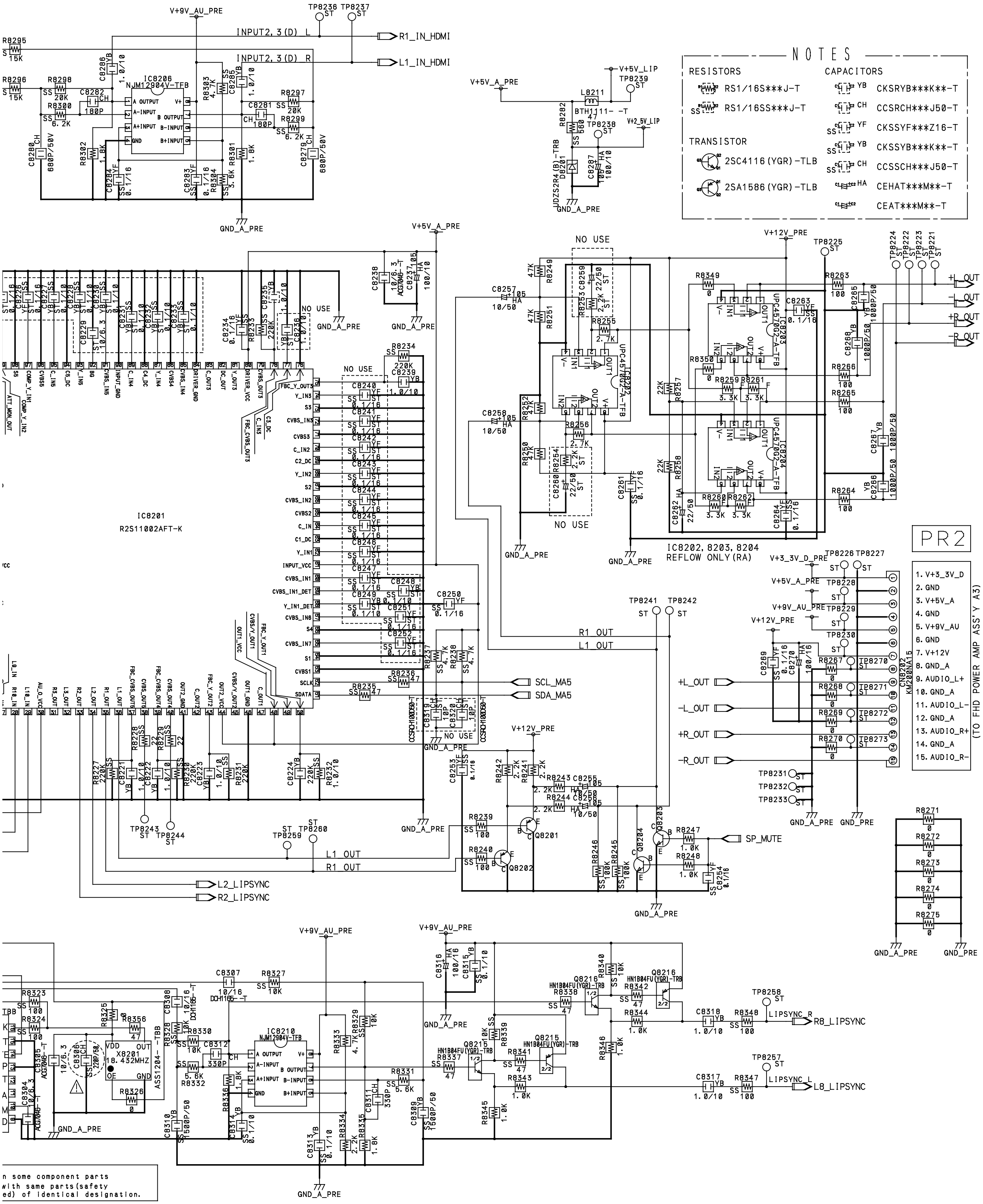

NO USE
PR1
(HDMI)
(FROM FHD MAIN ASS'Y M9)
11. SCL_MA5
10. SDA_MA5
9. M_MODE
8. SP_MUTE
7. GND
6. MCLK
5. GND
4. SCK
3. WS
2. SDO
1. A_MUTE_HDMI
CN8201 AKM1359-
SCL_MA5
SDA_MA5
SP_MUTE
IC8205 PCM1754DBQ-TBB
BCK SCK
DATA FMT
LRCK MUTE
DGND DEMP
NC TEST
VCC ZEROA
VOUTL VCOM
VOUTR AGND
4Vp-p
2.5VDC
GND_A_PRE
V+5V_A_PRE
V+9V_AU_PRE
Q8206 DTA124EUA-TLB
Q8205 DTC124EUA-TLB
NO USE
Q8207
Q8208
Q8209
Q8210
ATT_MON_OUT
TP8240
R1_IN_HDMI
L1_IN_HDMI
1.78Vp-p
COUNT_0
COUNT_1
LS_MUTE
AUDIO[0:11]
INPUT1_R
INPUT1_L
INPUT2(A)_R
INPUT2(A)_L
INPUT3(A)_R
INPUT3(A)_L
INPUT4_R
INPUT4_L
INPUT5_R
INPUT5_L
DEMP
INPUR6_R
INPUT6_L
INPUT1 (DVI)
INPUT2 (HDMI2)
INPUT3 (HDMI1)
INPUT4 (BNC)
INPUT5 (YC)
INPUT6 (CVBS)
JA8201 PKB1029-
JA8202 PKB1029-
JA8203 PKB1029-
JA8204 PKB1029-
JA8205 PKB1029-
JA8206 PKB1029-
STB
R8_LIPSYNC
L8_LIPSYNC
V+5V_LIP
V+3_3V_LIP
V+3_3V_D_PRE
V+2_5V_LIP
IC8207 PCM1803DB-TBB
VINL MODE1
VINR MODE0
VREF1 FMT1
VREF2 FMT0
VCC OSR
AGND SCKI
PDWN VDD
BYPAS DGND
TEST DOUT
LRCK BCK
IC8208 NJU26901F2-TFB
SDI VDD
LRI SDO
BCKI COUNT(1)
VSS COUNT(0)
IC8209 PCM1754DBQ-TBB
Q8211
Q8212
Q8213 DTA124EUA-TLB
L2_LIPSYNC
R2_LIPSYNC
V+9V_AU_PRE
COUNT_0
COUNT_1
LS_MUTE
Lip sy

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance unless otherwise noted, k : kΩ, M : MΩ.

* CAPACITORS
Indicated in Capacity (µF) / Voltage (V) unless otherwise noted. p : pF
Indication without voltage is 50V except electrolytic capacitor.

USED	VACANT
C 8201-8338	8213-8218, 8288, 8334, 8336
CN 8201-8202	
D 8201-8201	
IC 8201-8210	
JA 8201-8206	
L 8211	
Q 8201-8216	8214
R 8201-8376	8357-8360
TP 8201-8286	8274-8280
X 8201	

The ⚠ mark found on some component part
should be replaced with same parts(safet
regulation authorized) of identical desi



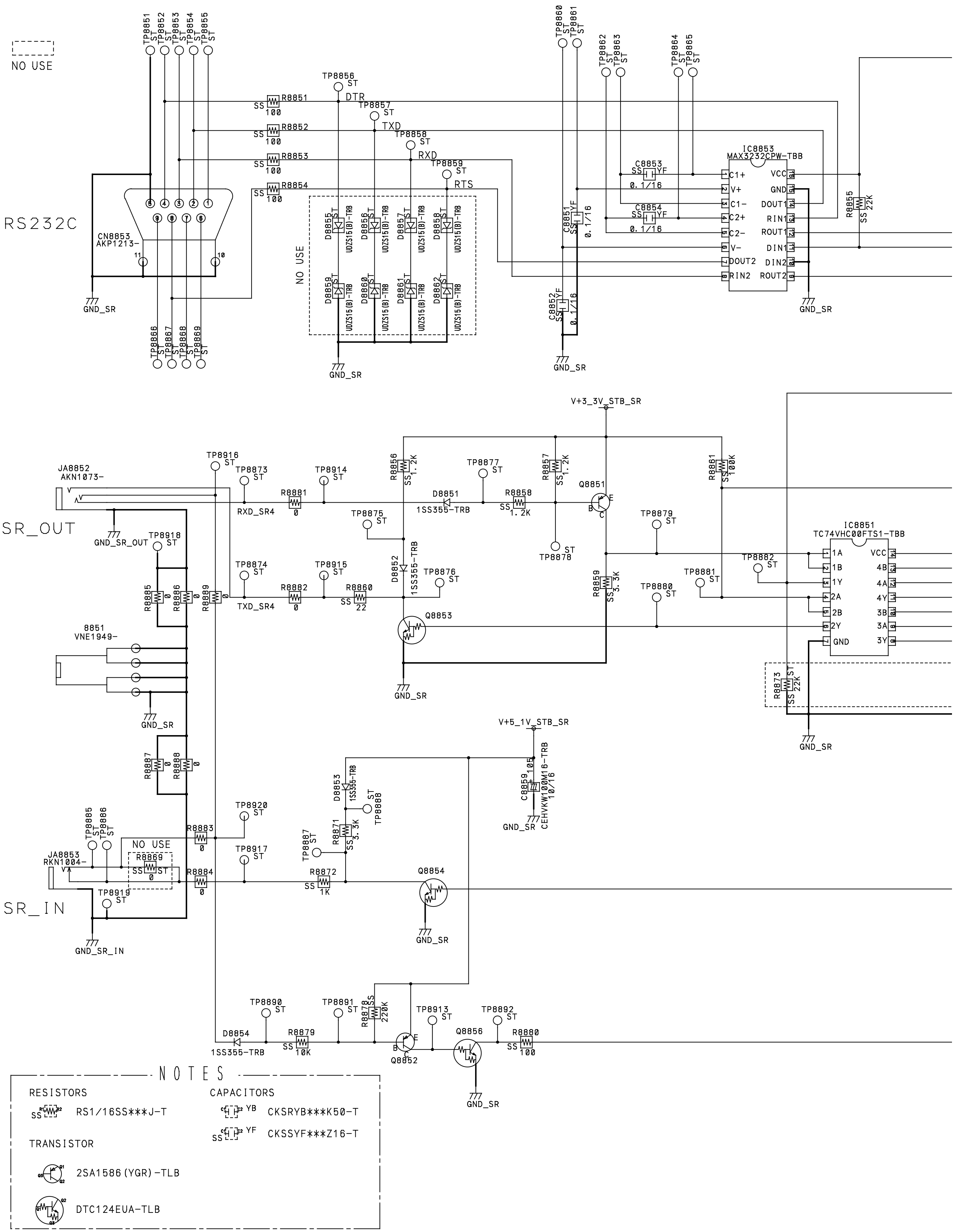
V+9V_AU_PRE
TP8236 TP8237
INPUT2,3(D) L
INPUT2,3(D) R
R1_IN_HDMI
L1_IN_HDMI
R8295 15K
R8296 15K
R8298 20K
R8300 6.2K
C8282 180P
C8286 1.0/10
IC8206
NJM12904V-TFB
A OUTPUT
A-INPUT
A+INPUT
GND
V+
B OUTPUT
B-INPUT
B+INPUT
R8303 4.7K
C8285 1.0/10
R8297 20K
C8281 180P
R8299 6.2K
C8280 680P/50V
R8302 1.8K
C8284 0.1/16
C8283 0.1/16
R8304 3.6K
R8301 1.8K
C8279 680P/50V
GND_A_PRE
V+5V_LIP
TP8239
V+5V_A_PRE
L8211
BTH1111- -T
R8282 560
TP8238
V+2.5V_LIP
D8201 JDZS2R4(B)-TRB
C8287 100/10
NOTES
RESISTORS
RS1/16S***J-T
RS1/16SS***J-T
TRANSISTOR
2SC4116(YGR)-TLB
2SA1586(YGR)-TLB
CAPACITORS
YB CKSRYB***K**-T
CH CCSRCH***J50-T
YF CKSSYF***Z16-T
YB CKSSYB***K**-T
CH CCSSCH***J50-T
HA CEHAT***M**-T
CEAT***M**-T
V+5V_A_PRE
C8238
C8237 100/10
NO USE
C8234 0.1/16
R8233
C8235 220K
C8236 1.0/10
R8234 220K
C8239 1.0/10
C8240 0.1/16
C8241 0.1/16
C8242 0.1/16
C8243 0.1/16
C8244 0.1/16
C8245 0.1/16
C8246 0.1/16
C8247 0.1/16
C8248 0.1/10
C8249 0.1/10
C8250 0.1/16
C8251 0.1/16
C8252 0.1/16
IC8201
R2S11002AFT-K
FBC_Y_OUT3
Y_IN3
S3
CVBS_IN3
CVBS3
C_IN2
C2_DC
Y_IN2
S2
CVBS_IN2
CVBS2
C_IN
C1_DC
Y_IN1
INPUT_VCC
CVBS_IN1
CVBS_IN1_DET
Y_IN1_DET
CVBS_IN8
S4
CVBS_IN7
S1
CVBS1
SCLK
SDATA
R8235 47
R8236 47
R8237 4.7K
R8238 4.7K
SCL_MA5
SDA_MA5
C8319 10P
C8320 10P
NO USE
GND_A_PRE
R8227 220K
C8221 1.0/10
R8228 22
C8222 1.0/10
R8229 22
R8230 220K
C8223 1.0/10
R8231 220K
C8224 1.0/10
R8232 220K
TP8243
TP8244
TP8259
TP8260
L1 OUT
R1 OUT
L2_LIPSYNC
R2_LIPSYNC
V+12V_PRE
TP8225
TP8224 TP8222 TP8223 TP8221
+L_OUT
-L_OUT
+R_OUT
-R_OUT
R8249 47K
R8251 47K
C8257 10/50
C8259 22/50
R8253 2.2K
R8255 2.7K
IC8202 UPC4570G2-A-TFB
R8349 0
IC8203 UPC4570G2-A-TFB
C8263 0.1/16
R8263 100
C8265 1000P/50
C8268 1000P/50
R8350 0
R8259 3.3K
R8261 3.3K
R8266 100
R8265 100
R8257 22K
R8252
C8258 10/50
R8256 2.7K
R8250
R8254 2.2K
C8260 22/50
NO USE
C8261 0.1/16
R8258 22K
IC8204 UPC4570G2-A-TFB
C8262 22/50
R8260 3.3K
R8262 3.3K
C8264 0.1/16
R8264 100
C8267 1000P/50
C8266 1000P/50
IC8202,8203,8204
REFLOW ONLY(RA)
PR2
V+3_3V_D_PRE
TP8226 TP8227
V+5V_A_PRE
TP8228
V+9V_AU_PRE
TP8229
V+12V_PRE
TP8230
TP8241 TP8242
R1 OUT
L1 OUT
C8269 0.1/16
C8270 100/16
R8267 0
R8268 0
R8269 0
R8270 0
TP8270 TP8271 TP8272 TP8273
CN8202 KM200NA15
1. V+3_3V_D
2. GND
3. V+5V_A
4. GND
5. V+9V_AU
6. GND
7. V+12V
8. GND_A
9. AUDIO_L+
10. GND_A
11. AUDIO_L-
12. GND_A
13. AUDIO_R+
14. GND_A
15. AUDIO_R-
(TO FHD POWER AMP ASS'Y A3)
TP8231 TP8232 TP8233
GND_A_PRE GND_PRE
R8271 0
R8272 0
R8273 0
R8274 0
R8275 0
V+12V_PRE
C8253 0.1/16
R8242 2.2K
R8241 2.2K
R8243 2.2K
C8255 10/50
R8244 2.2K
C8256 10/50
R8239 100
Q8201
R8240 100
Q8202
R8246 100K
R8245 100K
Q8204
Q8203
R8247 1.0K
R8248 1.0K
C8254 0.1/10
SP_MUTE
V+9V_AU_PRE
C8307 10/16
R8327 10K
C8316 100/16
C8315 0.1/10
R8340 10K
Q8216 HN1B04FU(YGR)-TRB
R8338 47
R8342 47
R8344 1.0K
C8318 1.0/10
R8348 100
TP8258
LIPSYNC_R
R8_LIPSYNC
R8323 100
R8324 100
R8325
R8356 47
C8308 10/16
X8201 18.432MHZ
ASS1284-TBB
R8326 0
C8305 10/6.3
C8306 220P/50
C8304 10/6.3
R8328 10K
R8330 10K
C8312 330P
R8332 5.6K
IC8210 NJM12904V-TFB
R8329 10K
R8333 4.7K
R8331 5.6K
C8311 330P
C8310 1500P/50
R8336 1.8K
C8314 0.1/10
C8313 0.1/10
R8334 2.2K
R8335 1.8K
C8309 1500P/50
R8339 10K
Q8215 HN1B04FU(YGR)-TRB
R8337 47
R8341 47
R8343 1.0K
R8345 1.0K
R8346 1.0K
TP8257
C8317 1.0/10
R8347 100
LIPSYNC_L
L8_LIPSYNC
GND_A_PRE

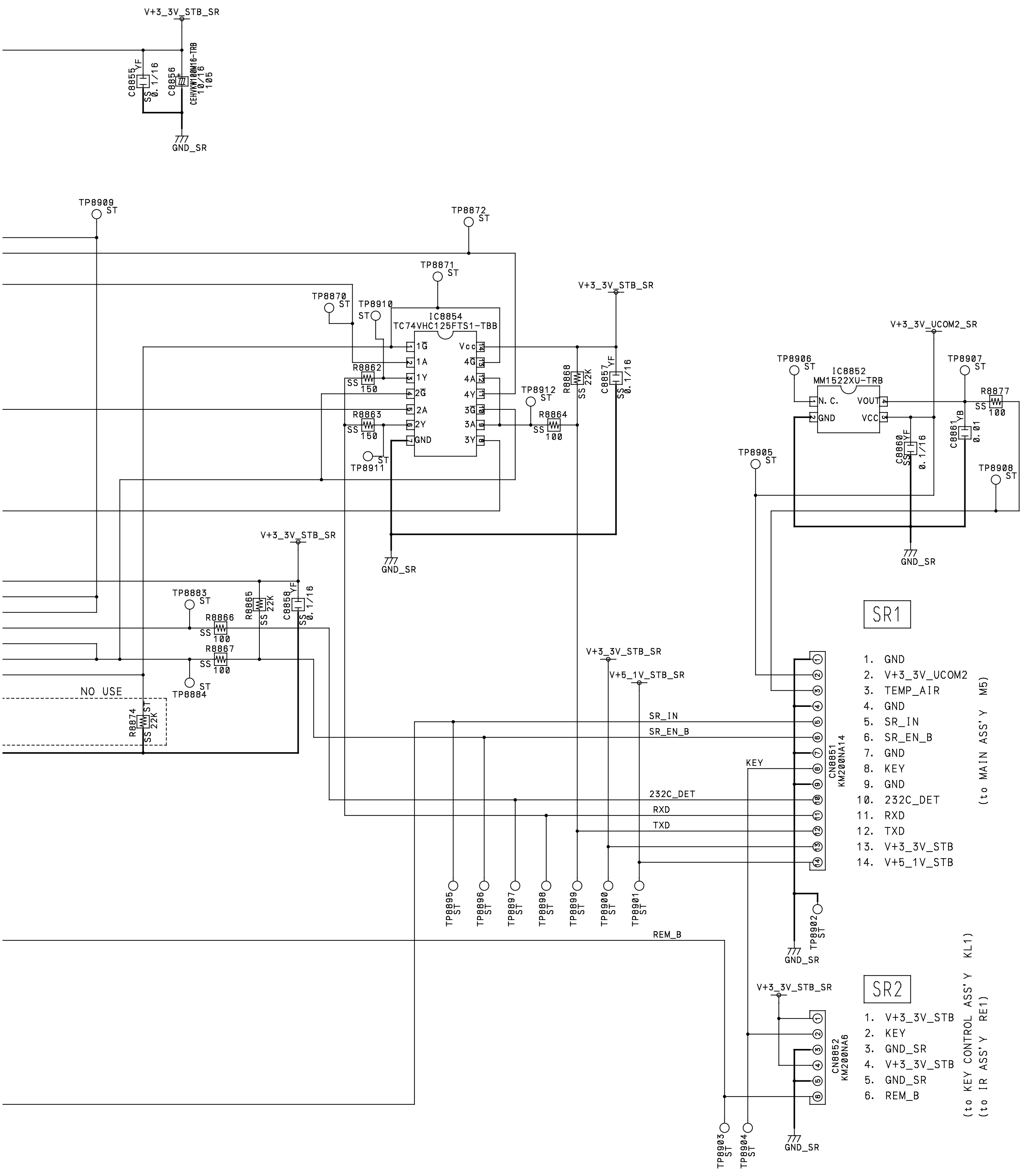
n some component parts
with same parts(safety
ed) of identical designation.

ip sync

1.31 FHD RS232C + SR ASSY

FHD RS232C+SR ASSY


NO USE
RS232C
CN8853
AKP1213-
GND_SR
TP8851 ST
TP8852 ST
TP8853 ST
TP8854 ST
TP8855 ST
TP8856 ST
TP8857 ST
TP8858 ST
TP8859 ST
TP8860 ST
TP8861 ST
TP8862 ST
TP8863 ST
TP8864 ST
TP8865 ST
TP8866 ST
TP8867 ST
TP8868 ST
TP8869 ST
R8851 SS 100
R8852 SS 100
R8853 SS 100
R8854 SS 100
DTR
TXD
RXD
RTS
D8855 ST UDZS15(B)-TRB
D8856 ST UDZS15(B)-TRB
D8857 ST UDZS15(B)-TRB
D8858 ST UDZS15(B)-TRB
D8859 ST UDZS15(B)-TRB
D8860 ST UDZS15(B)-TRB
D8861 ST UDZS15(B)-TRB
D8862 ST UDZS15(B)-TRB
C8851 SS YF 0.1/16
C8852 SS YF 0.1/16
C8853 SS YF 0.1/16
C8854 SS YF 0.1/16
IC8853
MAX3232CPW-TBB
C1+
V+
C1-
C2+
C2-
V-
DOUT2
RIN2
VCC
GND
DOUT1
RIN1
ROUT1
DIN1
DIN2
ROUT2
R8855 SS 22K
V+3_3V_STB_SR
JA8852
AKN1073-
SR_OUT
GND_SR_OUT
TP8916 ST
TP8873 ST
TP8914 ST
TP8918 ST
TP8874 ST
TP8915 ST
TP8875 ST
TP8876 ST
TP8877 ST
TP8878 ST
TP8879 ST
TP8880 ST
TP8881 ST
TP8882 ST
R8881 0
RXD_SR4
R8882 0
TXD_SR4
R8860 SS 22
R8856 SS 1.2K
R8857 SS 1.2K
R8858 SS 1.2K
R8859 SS 3.3K
R8861 SS 100K
D8851 1SS355-TRB
D8852 1SS355-TRB
Q8851
Q8853
R8885 0
R8886 0
R8889 0
8851
VNE1949-
IC8851
TC74VHC00FTS1-TBB
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
R8873 SS ST 22K
R8887 0
R8888 0
V+5_1V_STB_SR
C8859 105 CEHVKW100M16-TRB 10/16
D8853 1SS355-TRB
TP8888 ST
TP8920 ST
TP8917 ST
TP8887 ST
TP8885 ST
TP8886 ST
TP8919 ST
R8883 0
R8884 0
R8869 SS ST 0
R8871 SS 3.3K
R8872 SS 1K
Q8854
JA8853
RKN1004-
SR_IN
GND_SR_IN
TP8890 ST
TP8891 ST
TP8913 ST
TP8892 ST
R8878 SS 220K
R8879 SS 10K
R8880 SS 100
D8854 1SS355-TRB
Q8852
Q8856
NOTES
RESISTORS
RS1/16SS***J-T
CAPACITORS
YB CKSRYB***K50-T
YF CKSSYF***Z16-T
TRANSISTOR
2SA1586(YGR)-TLB
DTC124EUA-TLB


V+3_3V_STB_SR
C8855 YF SS 0.1/16
C8856 CEHVKW100M16-TRB 10/16 105
GND_SR
TP8909 ST
TP8872 ST
TP8871 ST
TP8870 ST
TP8910 ST
IC8854
TC74VHC125FTS1-TBB
1G
1A
1Y
2G
2A
2Y
GND
Vcc
4G
4A
4Y
3G
3A
3Y
R8862 SS 150
R8863 SS 150
TP8911 ST
TP8912 ST
R8864 SS 100
R8868 SS 22K
C8857 YF SS 0.1/16
GND_SR
V+3_3V_STB_SR
TP8883 ST
R8866 SS 100
R8867 SS 100
TP8884 ST
R8865 SS 22K
C8858 YF SS 0.1/16
NO USE
R8874 SS 22K ST
V+3_3V_STB_SR
V+5_1V_STB_SR
SR_IN
SR_EN_B
KEY
232C_DET
RXD
TXD
REM_B
TP8895 ST
TP8896 ST
TP8897 ST
TP8898 ST
TP8899 ST
TP8900 ST
TP8901 ST
TP8902 ST
GND_SR
V+3_3V_UCOM2_SR
TP8906 ST
IC8852
MM1522XU-TRB
N.C.
GND
VOUT
VCC
TP8907 ST
R8877 SS 100
C8860 YF SS 0.1/16
C8861 YB 0.01
TP8905 ST
TP8908 ST
GND_SR
SR1
CN8851
KM200NA14
1. GND
2. V+3_3V_UCOM2
3. TEMP_AIR
4. GND
5. SR_IN
6. SR_EN_B
7. GND
8. KEY
9. GND
10. 232C_DET
11. RXD
12. TXD
13. V+3_3V_STB
14. V+5_1V_STB
(to MAIN ASS'Y M5)
SR2
V+3_3V_STB_SR
CN8852
KM200NA6
1. V+3_3V_STB
2. KEY
3. GND_SR
4. V+3_3V_STB
5. GND_SR
6. REM_B
(to KEY CONTROL ASS'Y KL1)
(to IR ASS'Y RE1)
TP8903 ST
TP8904 ST
GND_SR

USED	VACANT
C 8851-8861	
CN 8851-8853	
D 8851-8862	
IC 8851-8854	
JA 8852-8853	
Q 8851-8856	8855
R 8851-8889	8870, 8875-8876
TP 8851-8920	8889, 8893-8894

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance unless otherwise noted, k : kΩ, M : MΩ.

* CAPACITORS
Indicated in Capacity (μF) / Voltage (V) unless otherwise noted. p : pF
Indication without voltage is 50V except electrolytic capacitor.

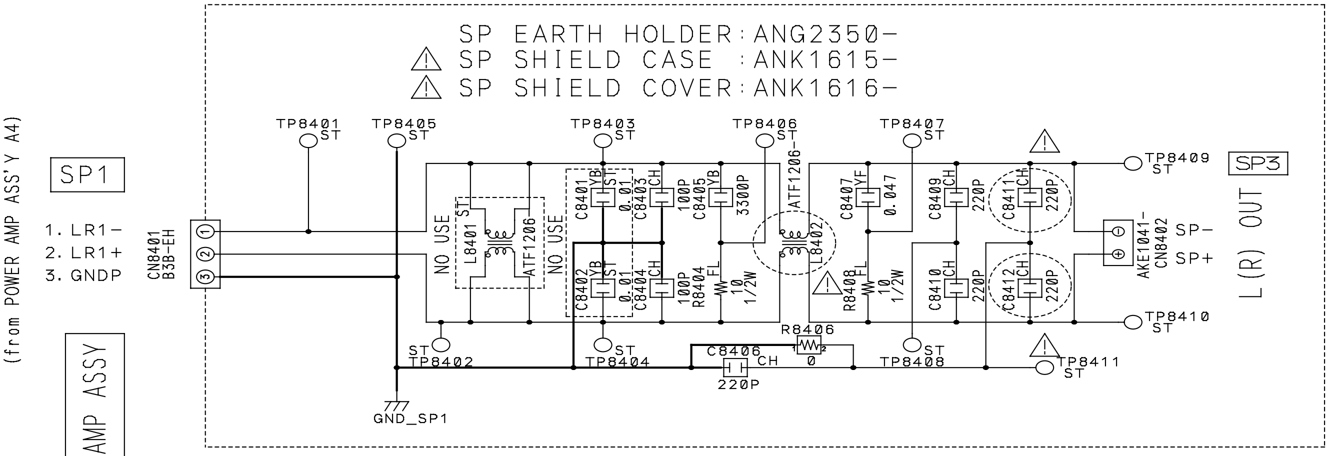
1.32 FHD SP LR1 and FHD SP LR2 ASSYS

FHD SP1 LR1 and FHD SP LR2 ASSYS

NO USE

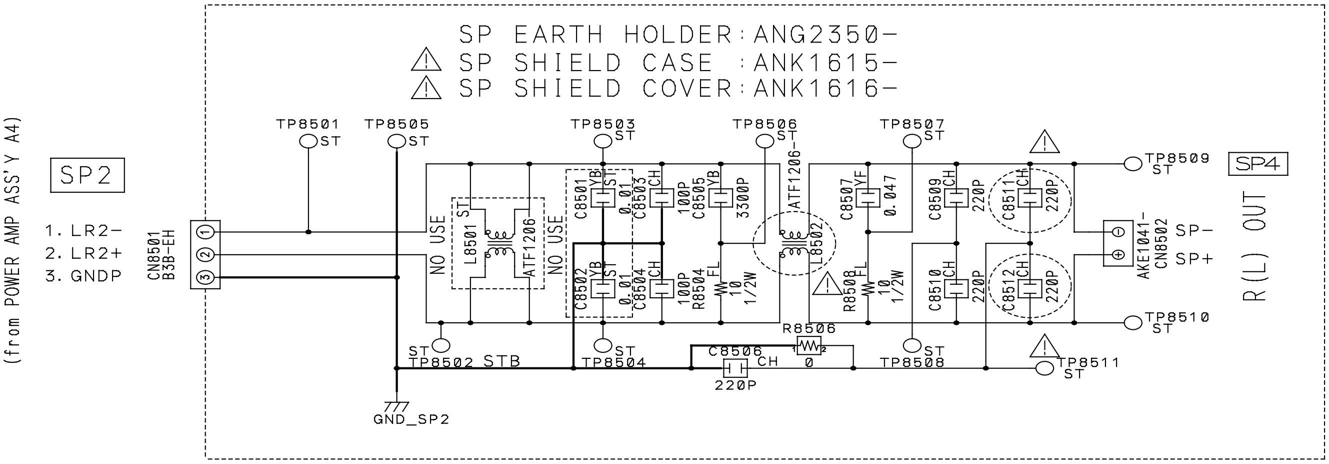
AWW1119
FHD SP LR1 ASSY

The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.


SP EARTH HOLDER:ANG2350-
⚠ SP SHIELD CASE :ANK1615-
⚠ SP SHIELD COVER:ANK1616-
SP1
1. LR1-
2. LR1+
3. GNDP
CN8401 B3B-EH
(from POWER AMP ASS'Y A4)
FROM FHD POWER AMP ASSY
TP8401 TP8405 TP8403 TP8406 TP8407 TP8409 TP8410 TP8402 TP8404 TP8408 TP8411
L8401 ATF1206 NO USE
C8401 YB 0.01 C8402
C8403 CH 100P C8404
C8405 YB 3300P
R8404 FL 10 1/2W
L8402 ATF1206-
C8407 YF 0.047
R8408 FL 10 1/2W
C8409 CH 220P C8410 CH 220P
C8411 CH 220P C8412 CH 220P
C8406 CH 220P
R8406 0
AKE1041- CN8402 SP- SP+
SP3
L(R) OUT
GND_SP1

USED	VACANT
C 8401-8512	8408, 8413-8500, 8508
CN 8401-8502	8403-8500
L 8401-8502	8403-8500
R 8404-8508	8405, 8407, 8409-8503, 8505, 8507
TP 8401-8511	8412-8500

AWW1120
FHD SP LR2 ASSY


SP EARTH HOLDER:ANG2350-
⚠ SP SHIELD CASE :ANK1615-
⚠ SP SHIELD COVER:ANK1616-
SP2
1. LR2-
2. LR2+
3. GNDP
CN8501 B3B-EH
(from POWER AMP ASS'Y A4)
TP8501 TP8505 TP8503 TP8506 TP8507 TP8509 TP8510 TP8502 STB TP8504 TP8508 TP8511
L8501 ATF1206 NO USE
C8501 YB 0.01 C8502
C8503 CH 100P C8504
C8505 YB 3300P
R8504 FL 10 1/2W
L8502 ATF1206-
C8507 YF 0.047
R8508 FL 10 1/2W
C8509 CH 220P C8510 CH 220P
C8511 CH 220P C8512 CH 220P
C8506 CH 220P
R8506 0
AKE1041- CN8502 SP- SP+
SP4
R(L) OUT
GND_SP2

NOTES

RESISTORS
FL 1/2W RD1/2MMF***J-T

CAPACITORS
YF CKSRYF***Z50-T
YB CKSRYB***K50-T
CH CCSRCH***J50-T

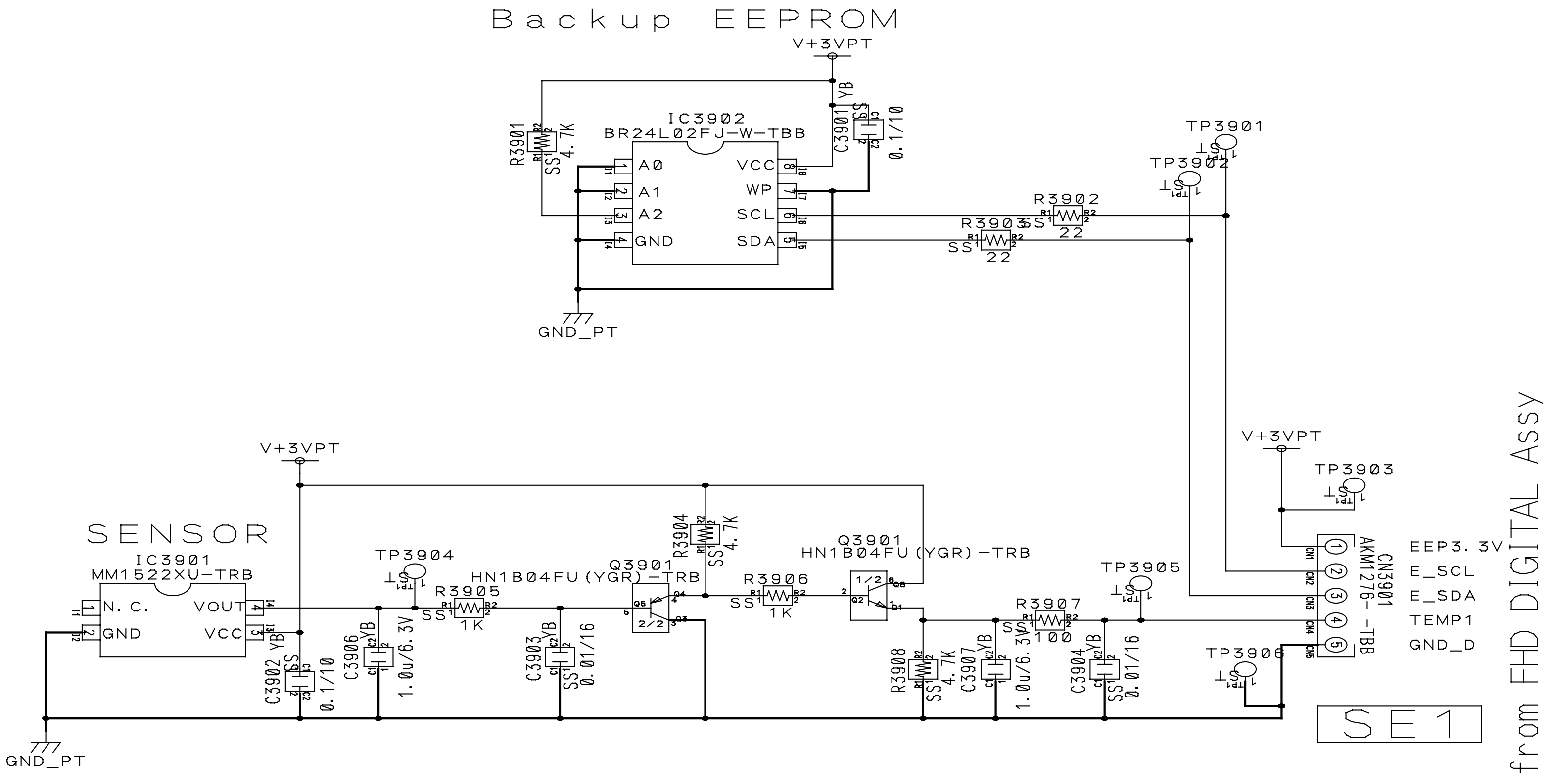
* RESISTORS
Indicated in Ω, ±5%, 1/16W
Tolerance unless otherwise noted,
k: kΩ, M: MΩ.

* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p: pF
Indication without voltage is 50V
except electrolytic capacitor.

1.33 PANEL SENCER ASSY

PANEL SENCER ASSY

NO USE


Backup EEPROM
V+3VPT
IC3902
BR24L02FJ-W-TBB
A0
A1
A2
GND
VCC
WP
SCL
SDA
C3901 YB SS 0.1/10
R3901 SS 4.7K
GND_PT
R3902 SS 22
R3903 SS 22
TP3901
TP3902
TP3903
V+3VPT
CN3901
AKM1276- -TBB
EEP3.3V
E_SCL
E_SDA
TEMP1
GND_D
SE1
from FHD DIGITAL Assy
TP3905
TP3906
R3907 SS 100
C3907 YB 1.0u/6.3V
C3904 YB SS 0.01/16
R3908 SS 4.7K
Q3901
HN1B04FU(YGR)-TRB
R3906 SS 1K
R3904 SS 4.7K
Q3901
HN1B04FU(YGR)-TRB
R3905 SS 1K
TP3904
C3903 YB SS 0.01/16
C3906 YB 1.0u/6.3V
C3902 YB SS 0.1/10
V+3VPT
SENSOR
IC3901
MM1522XU-TRB
N.C.
GND
VOUT
VCC
GND_PT

USED	VACANT
C 3901-3907	C3905
CN 3901-3901	
IC 3901-3902	
Q 3901-3901	
R 3901-3908	
TP 3901-3906	

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k:kΩ, M:MΩ.

* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF
Indication without voltage is 50V
except electrolytic capacitor.

1.34 FHD LED, FHD FAN CONNECT, FHD IR, FHD KEY and FHD KEY CONTROL ASSYS

A

FHD LED, FHD FAN CONNECT, FHD IR, FHD KEY and FHD KEY CONTROL ASSYS

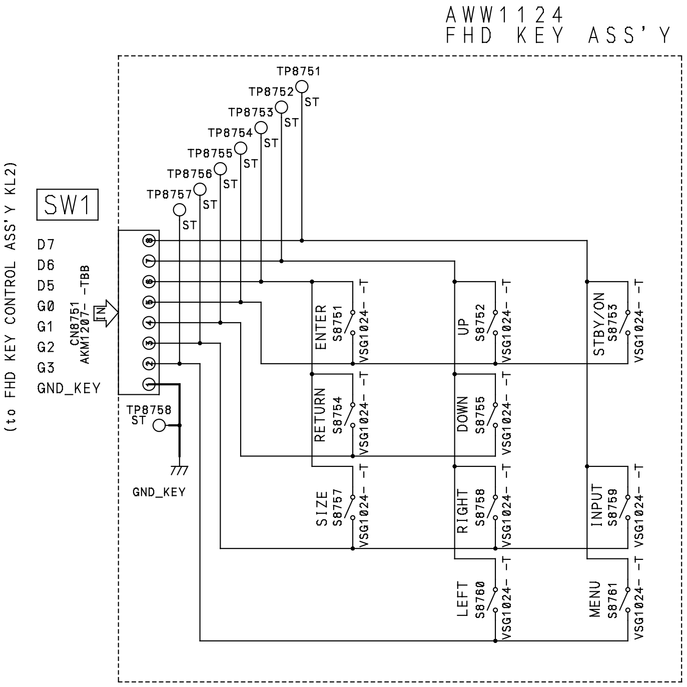
NOTES

RESISTORS	CAPACITORS
RS1/16S***J-T	YB CKSRYB***K50-T
SS RS1/16SS***J-T	CH CCSRCH***J50-T
	SS YF CKSSYF***Z16-T
	SS YB CKSSYB***K50-T

USED	VACANT
C 8701-8808	8709-8800
CN 8601-8802	8602-8650, 8656-8700, 8702-8750, 8752-8800
D 8601-8808	8603-8650, 8653-8700, 8702-8800
F 8801-8808	
IC 8801-8801	
Q 8651-8801	8653-8700, 8702-8800
R 8601-8814	8604-8650, 8657-8700, 8704-8800, 8811
S 8751-8761	8756
TP 8601-8830	8607-8650, 8660-8700, 8708-8750, 8759-8800
U 8701-8701	
X 8801-8801	

NO USE

B

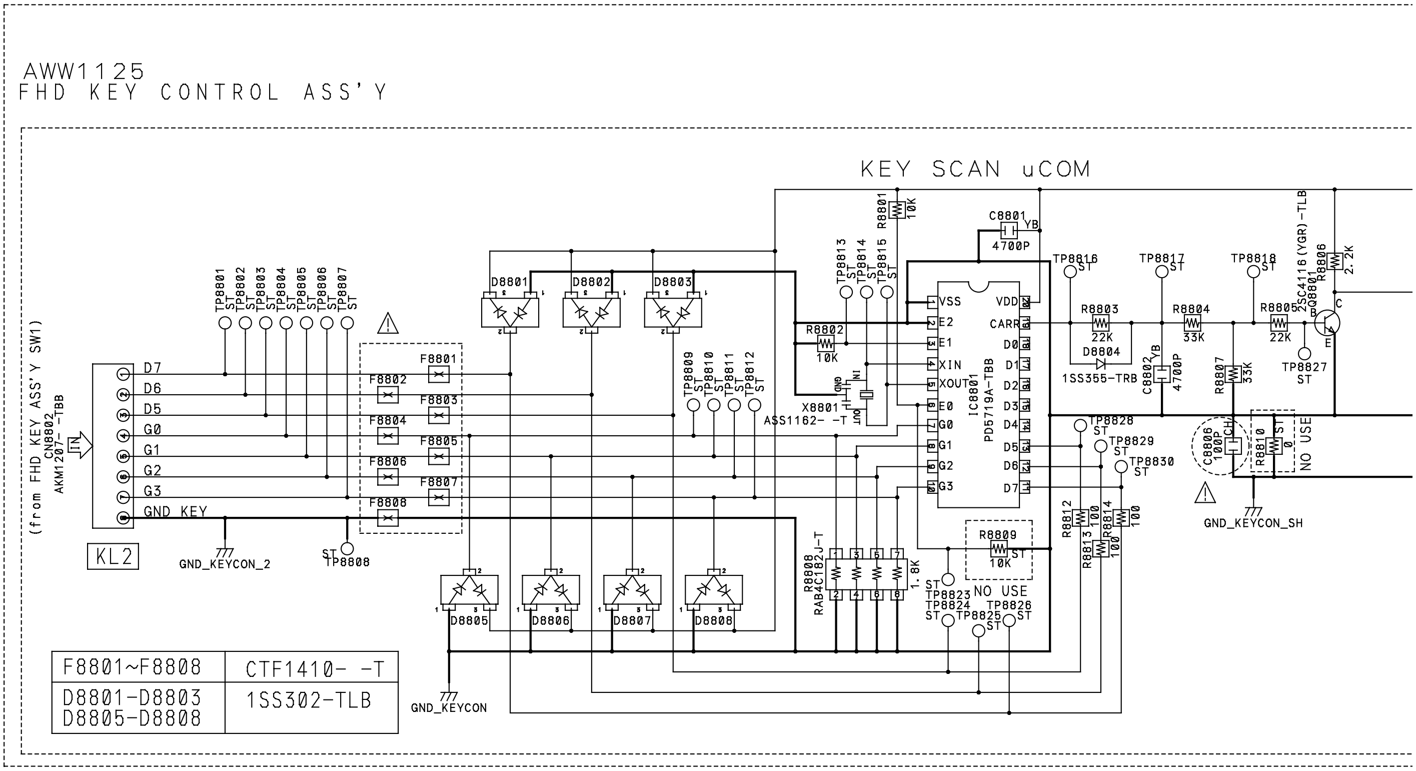

AWW1124
FHD KEY ASS'Y
(to FHD KEY CONTROL ASS'Y KL2)
SW1
CN8751 AKM1207- -TBB
D7
D6
D5
G0
G1
G2
G3
GND_KEY
TP8751
TP8752
TP8753
TP8754
TP8755
TP8756
TP8757
TP8758
ST
GND_KEY
ENTER S8751 VSG1024- -T
UP S8752 VSG1024- -T
STBY/ON S8753 VSG1024- -T
RETURN S8754 VSG1024- -T
DOWN S8755 VSG1024- -T
SIZE S8757 VSG1024- -T
RIGHT S8758 VSG1024- -T
INPUT S8759 VSG1024- -T
LEFT S8760 VSG1024- -T
MENU S8761 VSG1024- -T

KEY MATRIX

	D5	D6	D7
G0	ENTER/DISPLAY	UP	STAND BY/ON
G1	RETURN	DOWN	NO USE
G2	SCREEN SIZE	RIGHT/VOL UP	INPUT
G3	NO USE	LEFT/VOL DOWN	HOME MENU

C

D


AWW1125
FHD KEY CONTROL ASS'Y
KEY SCAN uCOM
(from FHD KEY ASS'Y SW1)
CN8802 AKM1207- -TBB
KL2
D7
D6
D5
G0
G1
G2
G3
GND KEY
GND_KEYCON_2
TP8808
TP8801
TP8802
TP8803
TP8804
TP8805
TP8806
TP8807
F8801
F8802
F8803
F8804
F8805
F8806
F8807
F8808
D8801
D8802
D8803
D8805
D8806
D8807
D8808
GND_KEYCON
TP8809
TP8810
TP8811
TP8812
TP8813
TP8814
TP8815
R8801 10K
C8801 YB 4700P
R8802 10K
X8801 ASS1162- -T
IC8801 PD5719A-TBB
VSS
E2
E1
XIN
XOUT
E0
G0
G1
G2
G3
VDD
CARR
D0
D1
D2
D3
D4
D5
D6
D7
R8808 RAB4C182J-T 1.8K
R8809 10K
NO USE
TP8823
TP8824
TP8825
TP8826
TP8816
TP8817
TP8818
R8803 22K
D8804 1SS355-TRB
C8802 YB 4700P
R8804 33K
R8805 22K
R8806 2.2K
Q8801 2SC4116(YGR)-TLB
R8807 33K
TP8827
TP8828
TP8829
TP8830
C8806 CH 100P
R8810 0
NO USE
R8812 100
R8813 100
R8814 100
GND_KEYCON_SH

F8801~F8808	CTF1410- -T
D8801-D8803 D8805-D8808	1SS302-TLB

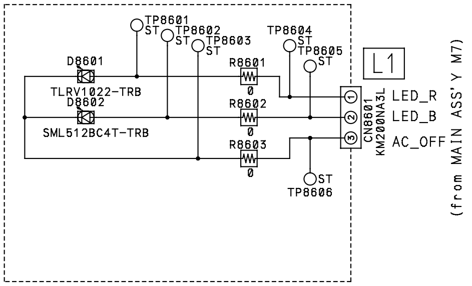
E

F

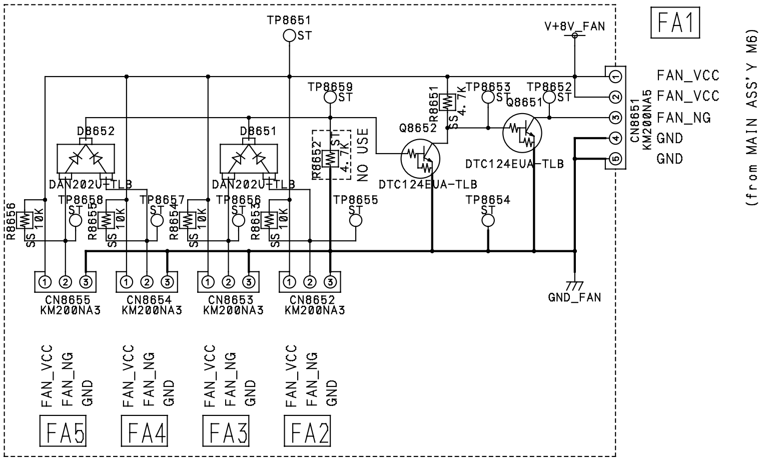
* RESISTORS
  Indicated in Ω, ±5%, 1/16W Tolerance
 unless otherwise noted, k: kΩ, M: MΩ.
* CAPACITORS
  Indicated in Capacity (μF) / Voltage (V)
 unless otherwise noted. p: pF
 Indication without voltage is 50V
 except electrolytic capacitor.

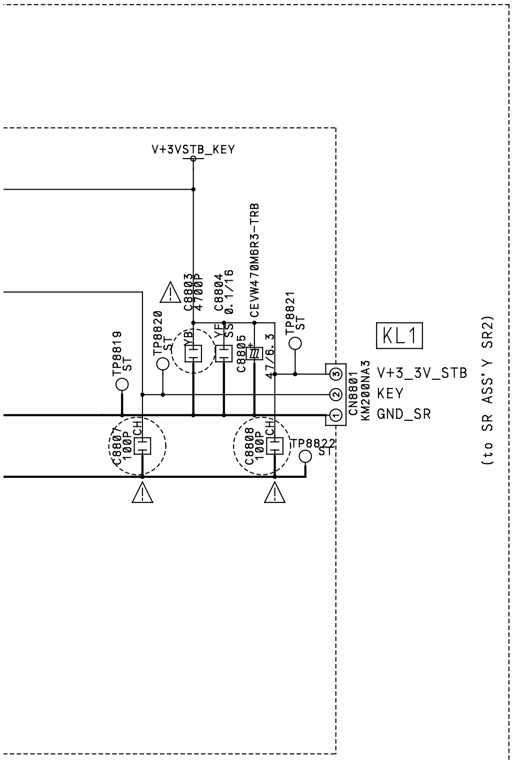
The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

AWW1121
FHD LED ASS'Y

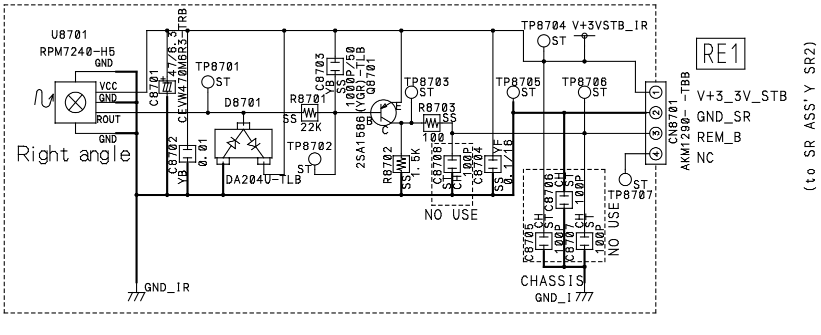

TP8601 ST
TP8602 ST
TP8603 ST
TP8604 ST
TP8605 ST
TP8606 ST
D8601
TLRV1022-TRB
D8602
SML512BC4T-TRB
R8601 0
R8602 0
R8603 0
L1
CN8601 KM200NA3L
① LED_R
② LED_B
③ AC_OFF
(from MAIN ASS'Y M7)

AWW1122
FHD FAN CONNECT ASS'Y


TP8651 ST
V+8V_FAN
FA1
CN8651 KM200NA5
① FAN_VCC
② FAN_VCC
③ FAN_NG
④ GND
⑤ GND
(from MAIN ASS'Y M6)
TP8659 ST
R8651 SS 4.7K
TP8653 ST
TP8652 ST
Q8651
Q8652
DTC124EUA-TLB
DTC124EUA-TLB
R8652 SS 4.7K NO USE
D8652 DAN202U-TLB
D8651 DAN202U-TLB
TP8658 ST
TP8657 ST
TP8656 ST
TP8655 ST
TP8654 ST
R8656 SS 10K
R8655 SS 10K
R8654 SS 10K
R8653 SS 10K
GND_FAN
CN8655 KM200NA3
CN8654 KM200NA3
CN8653 KM200NA3
CN8652 KM200NA3
FAN_VCC FAN_NG GND FA5
FAN_VCC FAN_NG GND FA4
FAN_VCC FAN_NG GND FA3
FAN_VCC FAN_NG GND FA2


V+3VSTB_KEY
CEVW470M6R3-TRB
C8803 4700P YB
C8804 0.1/16 YF SS
C8805 47/6.3
TP8819 ST
TP8820 ST
TP8821 ST
TP8822 ST
C8807 100P CH
C8808 100P CH
KL1
CN8801 KM200NA3
③ V+3_3V_STB
② KEY
① GND_SR
(to SR ASS'Y SR2)

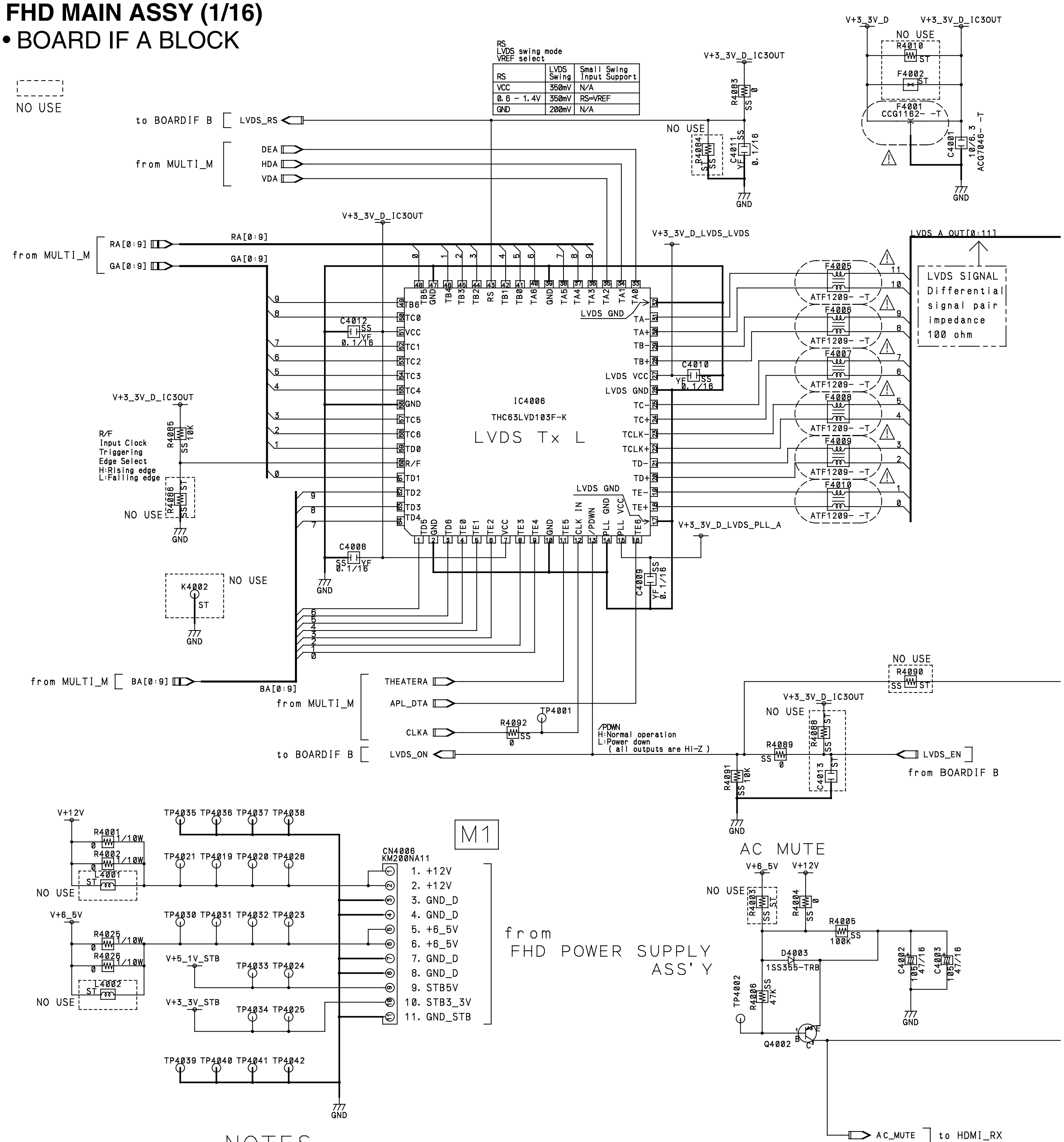
AWW1123
FHD IR ASS'Y


U8701
RPM7240-H5
GND
VCC
GND
ROUT
GND
Right angle
C8701 47/6.3
CEVW470M6R3-TRB
C8702 YB 0.01
TP8701 ST
D8701
DA204U-TLB
R8701 SS 22K
C8703 YB SS 1000P/50
Q8701 2SA1586(YGR)-TLB
TP8702 ST
TP8703 ST
R8703 SS 100
R8702 SS 1.5K
C8708 SL 100P
C8704 SS YF 0.1/16
NO USE
TP8704 V+3VSTB_IR ST
TP8705 ST
TP8706 ST
TP8707 ST
C8706 CH 100P
C8705 CH 100P
C8707 CH 100P
NO USE
CHASSIS
GND_I
GND_IR
RE1
CN8701 AKM1290- -TBB
① V+3_3V_STB
② GND_SR
③ REM_B
④ NC
(to SR ASS'Y SR2)

1.35 FHD MAIN ASSY (1/16)

FHD MAIN ASSY (1/16)

• BOARD IF A BLOCK


NO USE
to BOARDIF B
LVDS_RS
from MULTI_M
DEA
HDA
VDA
RS
LVDS swing mode
VREF select
RS | LVDS Swing | Small Swing Input Support
VCC | 350mV | N/A
0.6 - 1.4V | 350mV | RS=VREF
GND | 200mV | N/A
V+3_3V_D_IC3OUT
R4083 SS 0
NO USE
R4084 SS
C4011 YF SS 0.1/16
GND
V+3_3V_D
V+3_3V_D_IC3OUT
NO USE
R4010 ST
F4002 ST
F4001 CCG1162- -T
C4001 10/6.3 ACG7046- -T
GND
V+3_3V_D_IC3OUT
V+3_3V_D_LVDS_LVDS
LVDS_A_OUT[0:11]
from MULTI_M
RA[0:9]
GA[0:9]
C4012 SS YF 0.1/16
TB6 TC0 VCC TC1 TC2 TC3 TC4 GND TC5 TC6 TD0 R/F TD1 TD2 TD3 TD4
TB5 GND TB4 TB3 TB2 RS TB1 TB0 TA6 GND TA5 TA4 TA3 TA2 TA1 TA0
LVDS GND
TA- TA+ TB- TB+ LVDS VCC LVDS GND TC- TC+ TCLK- TCLK+ TD- TD+ TE- TE+
IC4006
THC63LVD103F-K
LVDS Tx L
LVDS GND
TD5 GND TD6 TE0 TE1 TE2 VCC TE3 TE4 GND TE5 CLK IN /PDWN PLL GND PLL VCC TE6
C4010 YF SS 0.1/16
V+3_3V_D_LVDS_PLL_A
F4005 ATF1209- -T
F4006 ATF1209- -T
F4007 ATF1209- -T
F4008 ATF1209- -T
F4009 ATF1209- -T
F4010 ATF1209- -T
LVDS SIGNAL
Differential
signal pair
impedance
100 ohm
V+3_3V_D_IC3OUT
R4085 SS 10K
R/F
Input Clock
Triggering
Edge Select
H:Rising edge
L:Falling edge
R4086 SS ST
NO USE
GND
C4008 SS YF 0.1/16
GND
K4002 ST
NO USE
GND
C4009 SS YF 0.1/16
from MULTI_M
BA[0:9]
BA[0:9]
from MULTI_M
THEATERA
APL_DTA
CLKA
TP4001
R4092 SS 0
/PDWN
H:Normal operation
L:Power down
(all outputs are Hi-Z)
to BOARDIF B
LVDS_ON
NO USE
R4090 SS ST
V+3_3V_D_IC3OUT
NO USE
R4088 SS ST
R4089 SS 0
C4013 ST
R4091 SS 10K
GND
LVDS_EN
from BOARDIF B
V+12V
R4001 0 1/10W
R4002 0 1/10W
L4001 ST
NO USE
V+6_5V
R4025 0 1/10W
R4026 0 1/10W
L4002 ST
NO USE
TP4035 TP4036 TP4037 TP4038
TP4021 TP4019 TP4020 TP4028
TP4030 TP4031 TP4032 TP4023
V+5_1V_STB
TP4033 TP4024
V+3_3V_STB
TP4034 TP4025
TP4039 TP4040 TP4041 TP4042
GND
M1
CN4006
KM200NA11
1. +12V
2. +12V
3. GND_D
4. GND_D
5. +6_5V
6. +6_5V
7. GND_D
8. GND_D
9. STB5V
10. STB3_3V
11. GND_STB
from
FHD POWER SUPPLY
ASS' Y
AC MUTE
V+6_5V
V+12V
NO USE
R4003 SS ST
R4004 SS 0
R4005 SS 100K
D4003
1SS355-TRB
C4002 105 47/16
C4003 105 47/16
GND
TP4002
R4006 SS 47K
Q4002
B C E
AC_MUTE
to HDMI_RX

NOTES

RESISTORS

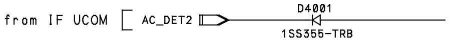
SS	RS1/16SS***J-T
	RS1/16S***J-T
1/10W	RS1/10S***J-T
SS F	RS1/16SS****F-T
F	RS1/16S****F-T
SS D	RS1/16SS****D-T
	RAB4CQ***J-T

CAPACITORS

YF SS	CKSSYF***Z**-T
YB SS	CKSSYB***K**-T
CH SS	CCSSCH***J50-T
CH SS 10P/50	CCSSCH100D50-T
CH SS 6.0P/50	CCSSCH6R0D50-T
CH SS 8.0P/50	CCSSCH8R0D50-T
YB	CKSRYB***K**-T
CH	CCSRCH***J50-T
105 100/6.3	CEHVKW101M6R3-TRB
105 47/16	CEHVKW470M16-TRB

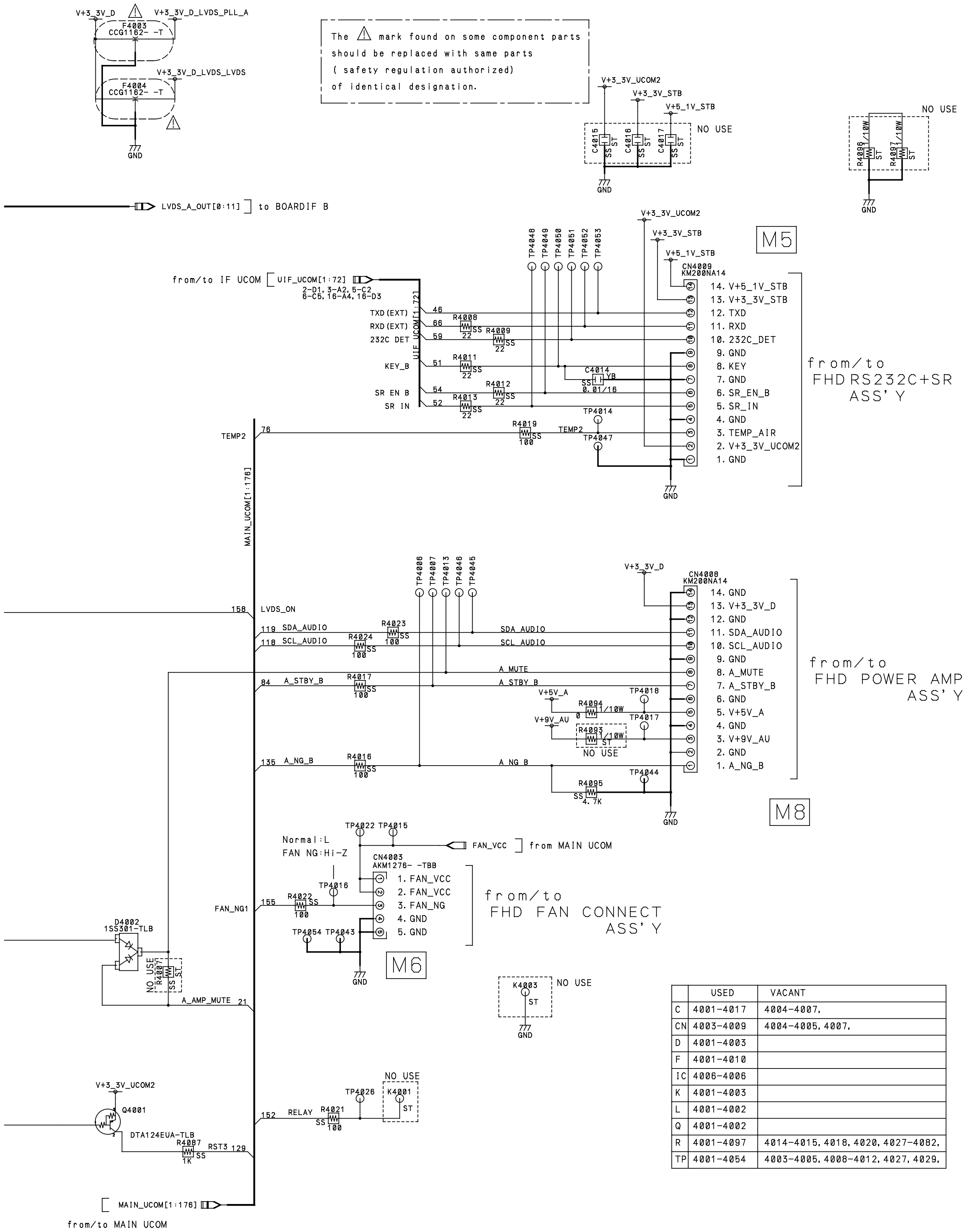
TRANSISTORS

B C E	2SC4116(YGR)-TLB
B E C	2SA1586(YGR)-TLB


from IF UCOM
AC_DET2
D4001
1SS355-TRB

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k:kΩ, M:MΩ.

* CAPACITORS
Indicated in Capacity(μF)/Voltage(V)
unless otherwise noted, p:pF.
Indication without voltage is 50V
except electrolytic capacitor.


V+3_3V_D
V+3_3V_D_LVDS_PLL_A
F4003
CCG1162- -T
V+3_3V_D_LVDS_LVDS
F4004
CCG1162- -T
GND
LVDS_A_OUT[0:11]
to BOARDIF B
V+3_3V_UCOM2
V+3_3V_STB
V+5_1V_STB
C4015 SS ST
C4016 SS ST
C4017 SS ST
NO USE
GND
NO USE
R4096 1/10W ST
R4097 1/10W ST
GND
M5
from/to IF UCOM
UIF_UCOM[1:72]
2-D1, 3-A2, 5-C2
6-C5, 16-A4, 16-D3
TP4048
TP4049
TP4050
TP4051
TP4052
TP4053
CN4009
KM200NA14
TXD (EXT) 46
RXD (EXT) 66
232C DET 59
KEY_B 51
SR EN B 54
SR IN 52
R4008 SS 22
R4009 SS 22
R4011 SS 22
R4012 SS 22
R4013 SS 22
C4014 YB SS 0.01/16
TP4014
TP4047
TEMP2 76
R4019 SS 100
TEMP2
14. V+5_1V_STB
13. V+3_3V_STB
12. TXD
11. RXD
10. 232C_DET
9. GND
8. KEY
7. GND
6. SR_EN_B
5. SR_IN
4. GND
3. TEMP_AIR
2. V+3_3V_UCOM2
1. GND
GND
from/to
FHD RS232C+SR
ASS' Y
MAIN_UCOM[1:176]
TP4006
TP4007
TP4013
TP4046
TP4045
V+3_3V_D
CN4008
KM200NA14
158 LVDS_ON
119 SDA_AUDIO
118 SCL_AUDIO
R4023 SS 100
R4024 SS 100
SDA AUDIO
SCL AUDIO
A MUTE
84 A_STBY_B
R4017 SS 100
A STBY B
V+5V_A
R4094 0 1/10W
TP4018
V+9V_AU
R4093 1/10W ST
NO USE
TP4017
135 A_NG_B
R4016 SS 100
A NG B
R4095 SS 4.7K
TP4044
GND
14. GND
13. V+3_3V_D
12. GND
11. SDA_AUDIO
10. SCL_AUDIO
9. GND
8. A_MUTE
7. A_STBY_B
6. GND
5. V+5V_A
4. GND
3. V+9V_AU
2. GND
1. A_NG_B
from/to
FHD POWER AMP
ASS' Y
M8
TP4022
TP4015
Normal:L
FAN NG:Hi-Z
FAN_VCC
from MAIN UCOM
CN4003
AKM1276- -TBB
1. FAN_VCC
2. FAN_VCC
3. FAN_NG
4. GND
5. GND
TP4016
FAN_NG1 155
R4022 SS 100
TP4054
TP4043
GND
M6
from/to
FHD FAN CONNECT
ASS' Y
D4002
1SS301-TLB
NO USE
R4007 SS ST
A_AMP_MUTE 21
K4003 ST
NO USE
GND
V+3_3V_UCOM2
Q4001
DTA124EUA-TLB
R4087 1K SS
RST3 129
NO USE
TP4026
K4001 ST
152 RELAY
R4021 SS 100
MAIN_UCOM[1:176]
from/to MAIN UCOM

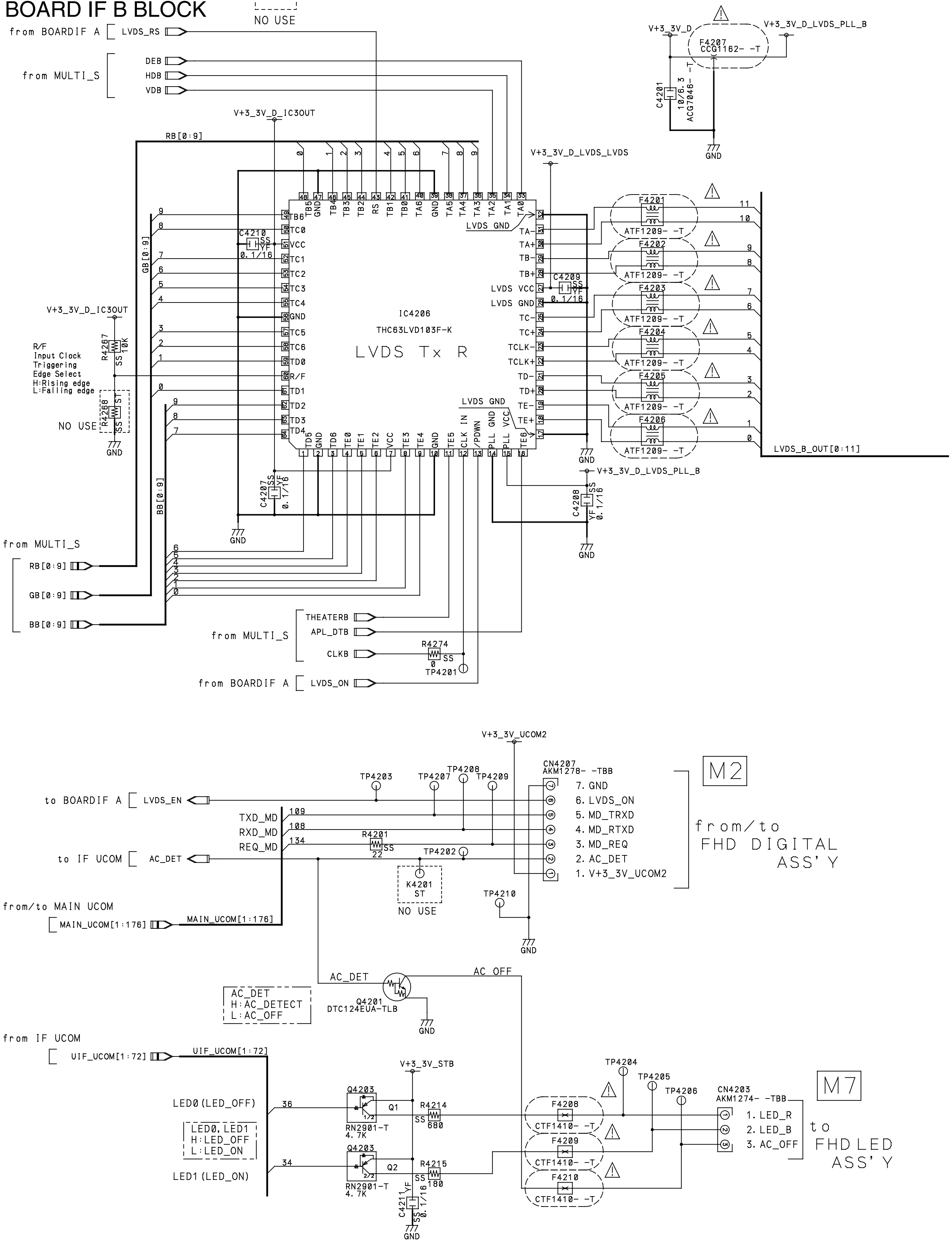
The ⚠ mark found on some component parts
should be replaced with same parts
(safety regulation authorized)
of identical designation.

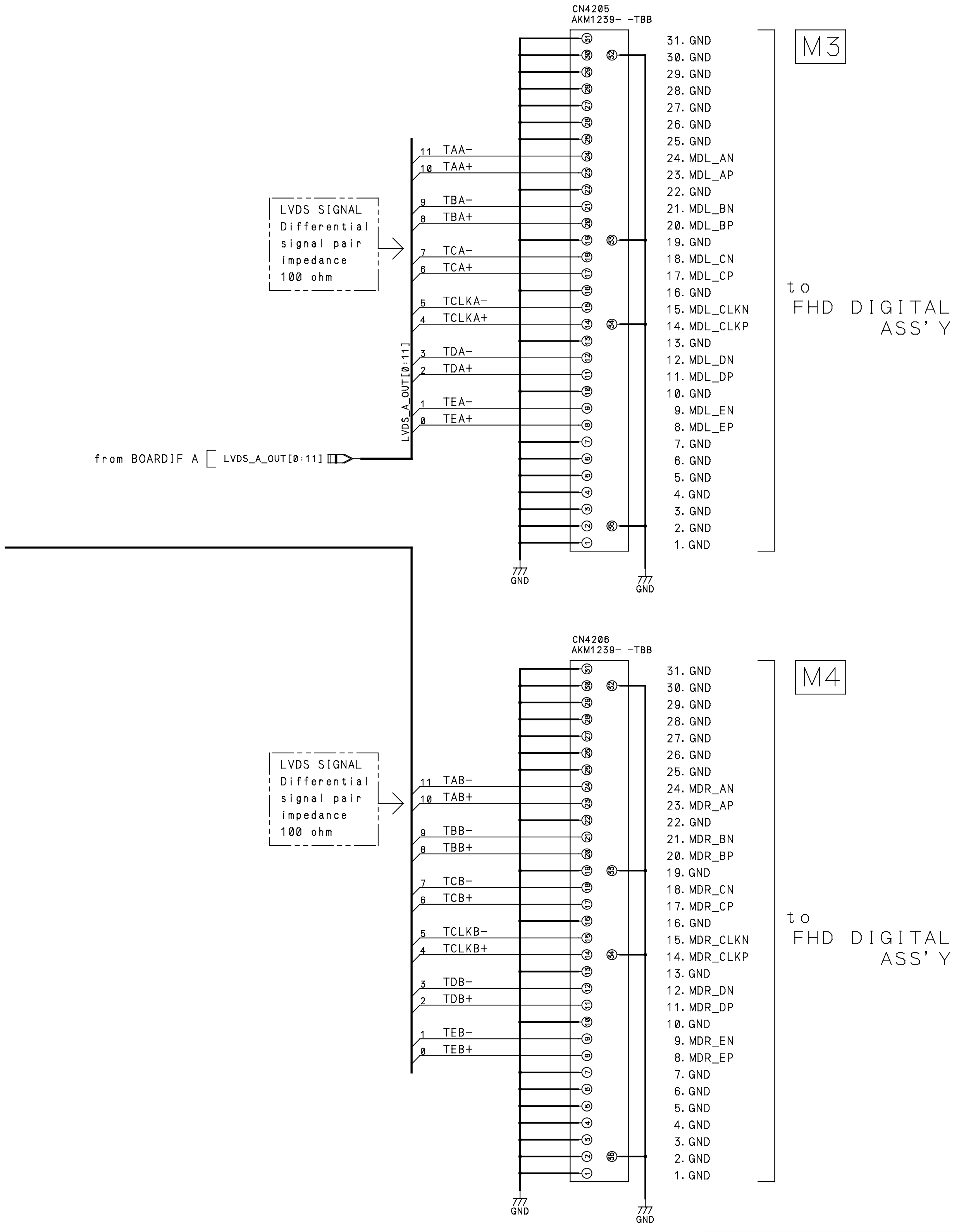
	USED	VACANT
C	4001-4017	4004-4007,
CN	4003-4009	4004-4005, 4007,
D	4001-4003	
F	4001-4010	
IC	4006-4006	
K	4001-4003	
L	4001-4002	
Q	4001-4002	
R	4001-4097	4014-4015, 4018, 4020, 4027-4082,
TP	4001-4054	4003-4005, 4008-4012, 4027, 4029,

1.36 FHD MAIN ASSY (2/16)

FHD MAIN ASSY (2/16)

• BOARD IF B BLOCK


A
B
C
D
E
F
NO USE
from BOARDIF A
LVDS_RS
from MULTI_S
DEB
HDB
VDB
V+3_3V_D
V+3_3V_D_LVDS_PLL_B
F4207
CCG1162- -T
C4201
10/6.3
ACG7046- -T
GND
V+3_3V_D_IC3OUT
RB[0:9]
V+3_3V_D_LVDS_LVDS
GB[0:9]
C4210
SS
YF
0.1/16
IC4206
THC63LVD103F-K
LVDS Tx R
TB5 GND TB4 TB3 TB2 RS TB1 TB0 TA6 GND TA5 TA4 TA3 TA2 TA1 TA0
TB6 TC0 VCC TC1 TC2 TC3 TC4 GND TC5 TC6 TD0 R/F TD1 TD2 TD3 TD4
LVDS GND
TA- TA+ TB- TB+ LVDS VCC LVDS GND TC- TC+ TCLK- TCLK+ TD- TD+ TE- TE+
TD5 GND TD6 TE0 TE1 TE2 VCC TE3 TE4 GND TE5 CLK IN /PDWN PLL GND PLL VCC TE6
C4209
SS
YF
0.1/16
F4201
F4202
F4203
F4204
F4205
F4206
ATF1209- -T
LVDS_B_OUT[0:11]
V+3_3V_D_IC3OUT
R4267
SS 10K
R/F
Input Clock
Triggering
Edge Select
H:Rising edge
L:Falling edge
R4268
SS ST
NO USE
GND
C4207
SS
YF
0.1/16
BB[0:9]
V+3_3V_D_LVDS_PLL_B
C4208
SS
YF
0.1/16
GND
from MULTI_S
RB[0:9]
GB[0:9]
BB[0:9]
from MULTI_S
THEATERB
APL_DTB
CLKB
R4274
0
SS
TP4201
from BOARDIF A
LVDS_ON
V+3_3V_UCOM2
CN4207
AKM1278- -TBB
TP4203
TP4207
TP4208
TP4209
7. GND
6. LVDS_ON
5. MD_TRXD
4. MD_RTXD
3. MD_REQ
2. AC_DET
1. V+3_3V_UCOM2
M2
from/to
FHD DIGITAL
ASS'Y
to BOARDIF A
LVDS_EN
TXD_MD
RXD_MD
REQ_MD
109
108
134
R4201
SS
22
TP4202
to IF UCOM
AC_DET
K4201
ST
NO USE
TP4210
GND
from/to MAIN UCOM
MAIN_UCOM[1:176]
MAIN_UCOM[1:176]
AC_DET
AC OFF
Q4201
DTC124EUA-TLB
GND
AC_DET
H:AC_DETECT
L:AC_OFF
from IF UCOM
UIF_UCOM[1:72]
UIF_UCOM[1:72]
V+3_3V_STB
TP4204
TP4205
TP4206
CN4203
AKM1274- -TBB
M7
Q4203
Q1
R4214
SS
680
RN2901-T
4.7K
F4208
F4209
F4210
CTF1410- -T
1. LED_R
2. LED_B
3. AC_OFF
to
FHD LED
ASS'Y
LED0 (LED_OFF)
36
LED0, LED1
H:LED_OFF
L:LED_ON
LED1 (LED_ON)
34
Q4203
Q2
R4215
SS
180
RN2901-T
4.7K
C4211
YF
0.1/16
SS
GND

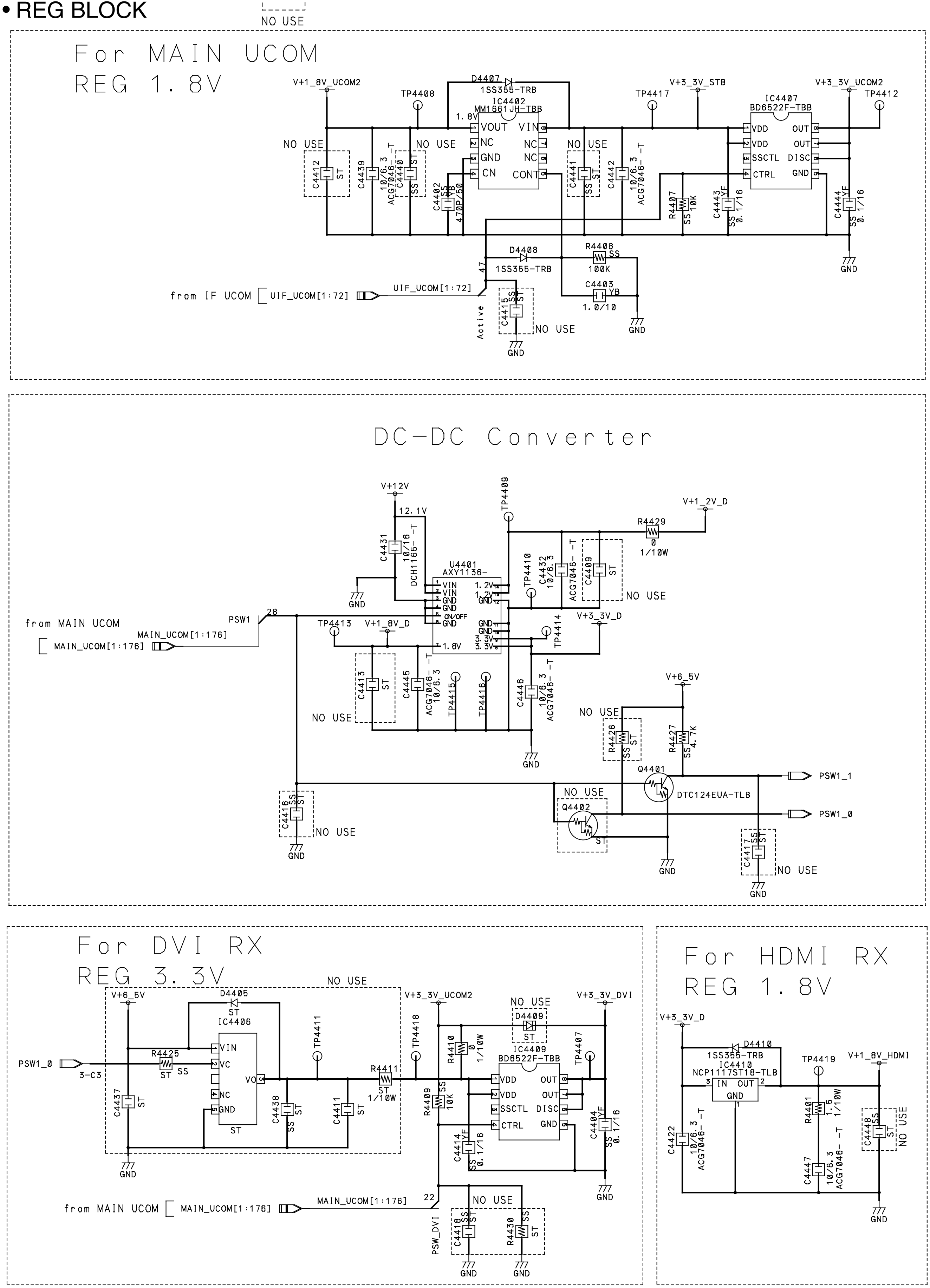

CN4205
AKM1239- -TBB
M3
31. GND
30. GND
29. GND
28. GND
27. GND
26. GND
25. GND
24. MDL_AN
23. MDL_AP
22. GND
21. MDL_BN
20. MDL_BP
19. GND
18. MDL_CN
17. MDL_CP
16. GND
15. MDL_CLKN
14. MDL_CLKP
13. GND
12. MDL_DN
11. MDL_DP
10. GND
9. MDL_EN
8. MDL_EP
7. GND
6. GND
5. GND
4. GND
3. GND
2. GND
1. GND
to FHD DIGITAL ASS'Y
LVDS SIGNAL Differential signal pair impedance 100 ohm
11 TAA-
10 TAA+
9 TBA-
8 TBA+
7 TCA-
6 TCA+
5 TCLKA-
4 TCLKA+
3 TDA-
2 TDA+
1 TEA-
0 TEA+
LVDS_A_OUT[0:11]
from BOARDIF A
LVDS_A_OUT[0:11]
GND
GND
CN4206
AKM1239- -TBB
M4
31. GND
30. GND
29. GND
28. GND
27. GND
26. GND
25. GND
24. MDR_AN
23. MDR_AP
22. GND
21. MDR_BN
20. MDR_BP
19. GND
18. MDR_CN
17. MDR_CP
16. GND
15. MDR_CLKN
14. MDR_CLKP
13. GND
12. MDR_DN
11. MDR_DP
10. GND
9. MDR_EN
8. MDR_EP
7. GND
6. GND
5. GND
4. GND
3. GND
2. GND
1. GND
to FHD DIGITAL ASS'Y
LVDS SIGNAL Differential signal pair impedance 100 ohm
11 TAB-
10 TAB+
9 TBB-
8 TBB+
7 TCB-
6 TCB+
5 TCLKB-
4 TCLKB+
3 TDB-
2 TDB+
1 TEB-
0 TEB+
GND
GND

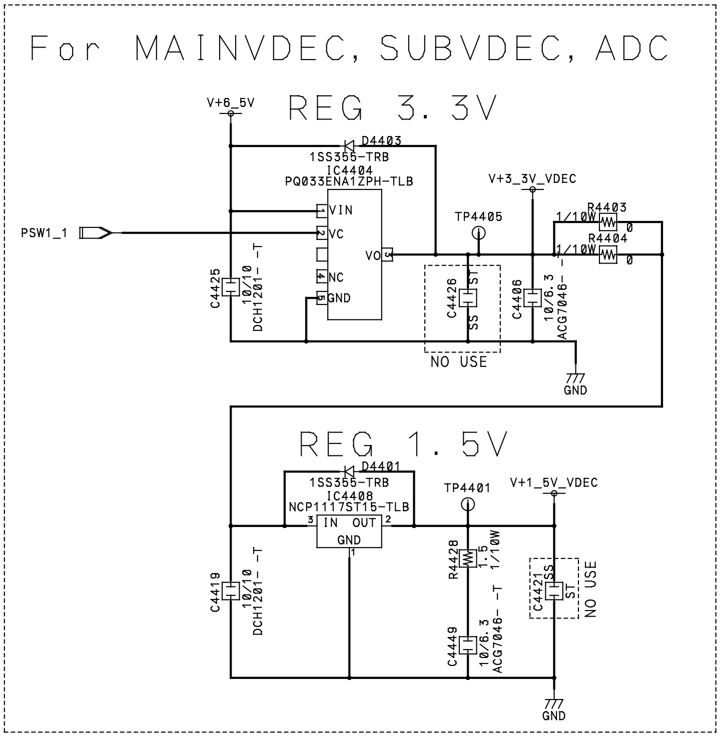
	USED	VACANT
C	4201-4211	4202-4206,
CN	4203-4207	4204,
F	4201-4210	
IC	4206-4206	
K	4201-4201	
Q	4201-4203	4202,
R	4201-4274	4202-4213, 4216-4266, 4269-4273,
TP	4201-4210	

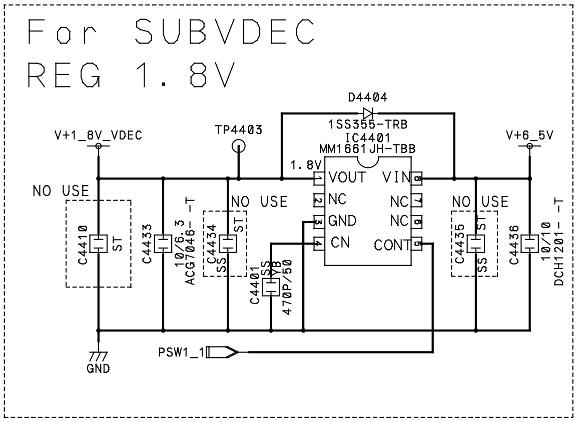
1.37 FHD MAIN ASSY (3/16)

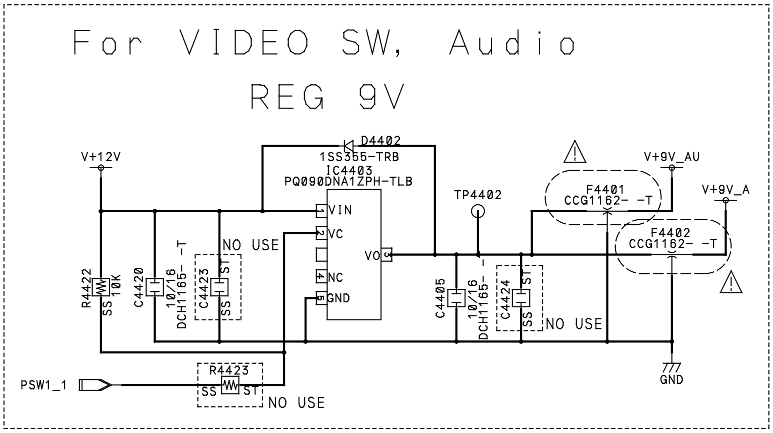
FHD MAIN ASSY (3/16)

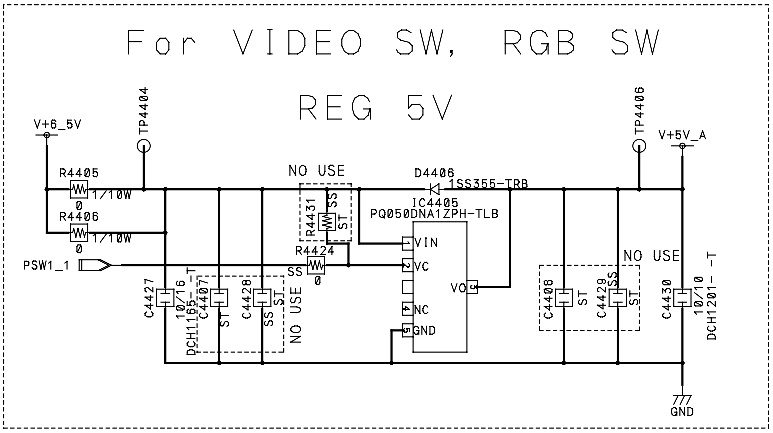
- REG BLOCK


NO USE
For MAIN UCOM
REG 1.8V
V+1_8V_UCOM2
TP4408
D4407
1SS355-TRB
IC4402
MM1661JH-TBB
1.8V
VOUT
VIN
NC
GND
CN
CONT
V+3_3V_STB
TP4417
V+3_3V_UCOM2
TP4412
IC4407
BD6522F-TBB
VDD
OUT
SSCTL
DISC
CTRL
GND
NO USE
C4412
ST
C4439
10/6.3
ACG7046-T
C4440
SS
C4402
SS
YB
470P/50
C4441
C4442
10/6.3
ACG7046-T
R4407
SS
10K
C4443
YF
0.1/16
C4444
YF
0.1/16
GND
D4408
1SS355-TRB
R4408
SS
100K
C4403
YB
1.0/10
47
from IF UCOM
UIF_UCOM[1:72]
Active
C4415
GND
DC-DC Converter
V+12V
12.1V
C4431
10/16
DCH1166-T
TP4409
V+1_2V_D
R4429
0
1/10W
U4401
AXY1136-
VIN
GND
ON/OFF
1.2V
1.8V
3V
TP4410
C4432
10/6.3
ACG7046-T
C4409
ST
NO USE
PSW1
28
from MAIN UCOM
MAIN_UCOM[1:176]
TP4413
V+1_8V_D
TP4414
V+3_3V_D
C4413
C4445
ACG7046-T
10/6.3
TP4415
TP4416
C4446
10/6.3
ACG7046-T
V+6_5V
R4426
SS
ST
R4427
SS
4.7K
Q4401
DTC124EUA-TLB
PSW1_1
Q4402
PSW1_0
C4416
C4417
For DVI RX
REG 3.3V
V+6_5V
D4405
ST
IC4406
VIN
VC
NC
GND
VO
R4425
SS
PSW1_0
3-C3
TP4411
C4437
C4438
C4411
R4411
ST
1/10W
V+3_3V_UCOM2
TP4418
R4410
0
1/10W
D4409
IC4409
BD6522F-TBB
VDD
OUT
SSCTL
DISC
CTRL
GND
TP4407
V+3_3V_DVI
R4409
SS
10K
C4414
YF
0.1/16
C4404
YF
0.1/16
from MAIN UCOM
MAIN_UCOM[1:176]
22
PSW_DVI
C4418
R4430
For HDMI RX
REG 1.8V
V+3_3V_D
D4410
1SS355-TRB
IC4410
NCP1117ST18-TLB
IN
OUT
GND
TP4419
V+1_8V_HDMI
C4422
10/6.3
ACG7046-T
R4401
1.5
1/10W
C4447
10/6.3
ACG7046-T
C4448
SS
ST
NO USE
GND


For MAINVDEC, SUBVDEC, ADC
REG 3.3V
V+6_5V
D4403
1SS355-TRB
IC4404
PQ033ENA1ZPH-TLB
V+3_3V_VDEC
PSW1_1
VIN
VC
NC
GND
VO
TP4405
R4403
1/10W
0
R4404
1/10W
0
C4425
10/10
DCH1201- -T
C4426
ST
SS
NO USE
C4406
10/6.3
ACG7046- -T
GND
REG 1.5V
D4401
1SS355-TRB
IC4408
NCP1117ST15-TLB
IN
OUT
GND
TP4401
V+1_5V_VDEC
C4419
10/10
DCH1201- -T
R4428
1.5
1/10W
C4449
10/6.3
ACG7046- -T
C4421
SS
ST
NO USE
GND


For SUBVDEC
REG 1.8V
D4404
1SS355-TRB
IC4401
MM1661JH-TBB
V+1_8V_VDEC
TP4403
V+6_5V
1.8V
VOUT
VIN
NC
NC
GND
NC
CN
CONT
NO USE
C4410
ST
C4433
10/6.3
ACG7046- -T
NO USE
C4434
SS
ST
C4401
SS
YB
470P/50
NO USE
C4435
ST
SS
C4436
10/10
DCH1201- -T
GND
PSW1_1


For VIDEO SW, Audio
REG 9V
D4402
1SS355-TRB
IC4403
PQ090DNA1ZPH-TLB
V+12V
V+9V_AU
V+9V_A
F4401
CCG1162- -T
F4402
CCG1162- -T
TP4402
VIN
VC
NC
GND
VO
R4422
SS
10K
C4420
10/16
DCH1165- -T
C4423
ST
SS
NO USE
C4405
10/16
DCH1165- -T
C4424
ST
SS
NO USE
GND
PSW1_1
R4423
SS
ST
NO USE

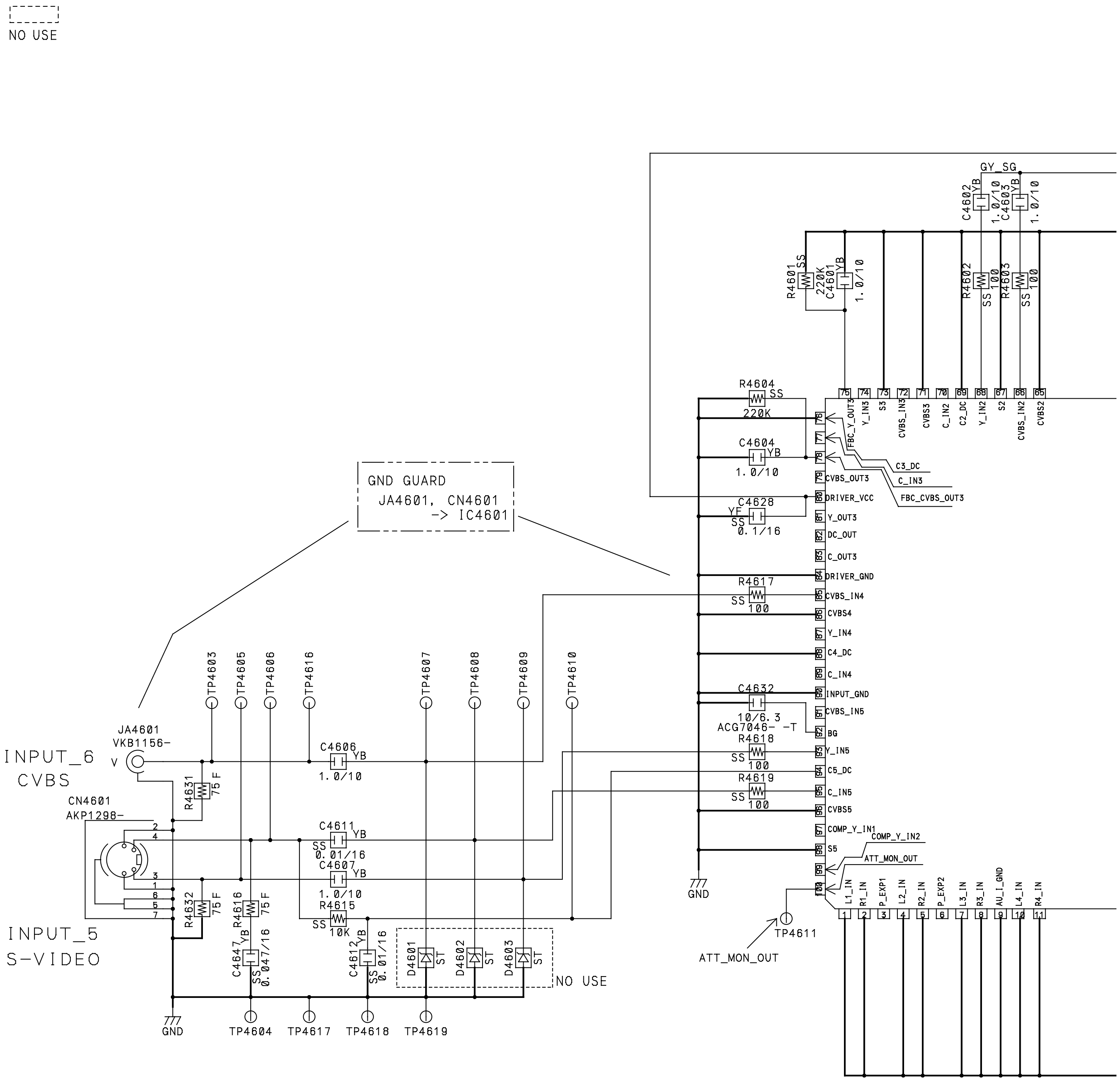

For VIDEO SW, RGB SW
REG 5V
V+6_5V
TP4404
TP4406
V+5V_A
R4405
0
1/10W
R4406
0
1/10W
PSW1_1
NO USE
R4431
SS
ST
R4424
SS
0
D4406
1SS355-TRB
IC4405
PQ050DNA1ZPH-TLB
VIN
VC
NC
GND
VO
C4427
10/16
DCH1165- -T
C4407
ST
C4428
SS
ST
NO USE
C4408
ST
C4429
SS
ST
NO USE
C4430
10/10
DCH1201- -T
GND

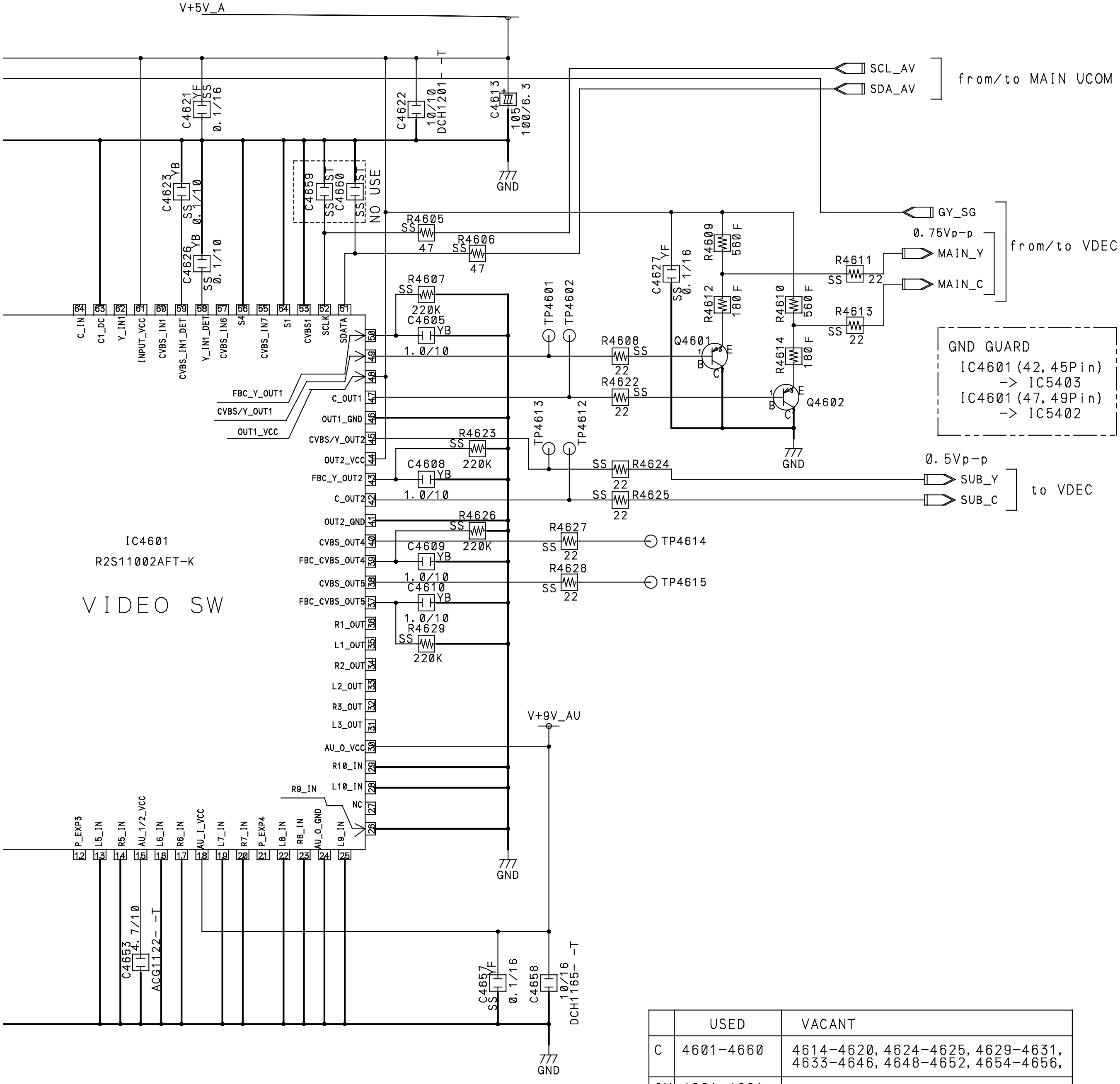
	USED	VACANT
C	4401-4449	
D	4401-4410	
F	4401-4402	
IC	4401-4410	
Q	4401-4402	
R	4401-4431	4402, 4412-4421,
TP	4401-4419	
U	4401-4401	

1.38 FHD MAIN ASSY (4/16)

FHD MAIN ASSY (4/16)

- VIDEO SW BLOCK


NO USE
GY_SG
C4602 YB 1.0/10
C4603 YB 1.0/10
R4601 SS 220K
C4601 YB 1.0/10
R4602 SS 100
R4603 SS 100
R4604 SS 220K
C4604 YB 1.0/10
C4628 YF SS 0.1/16
R4617 SS 100
C4632 10/6.3 ACG7046- -T
R4618 SS 100
R4619 SS 100
GND
75 FBC_Y_OUT3
74 Y_IN3
73 S3
72 CVBS_IN3
71 CVBS3
70 C_IN2
69 C2_DC
68 Y_IN2
67 S2
66 CVBS_IN2
65 CVBS2
76
77
78
C3_DC
C_IN3
FBC_CVBS_OUT3
79 CVBS_OUT3
80 DRIVER_VCC
81 Y_OUT3
82 DC_OUT
83 C_OUT3
84 DRIVER_GND
85 CVBS_IN4
86 CVBS4
87 Y_IN4
88 C4_DC
89 C_IN4
90 INPUT_GND
91 CVBS_IN5
92 BG
93 Y_IN5
94 C5_DC
95 C_IN5
96 CVBS5
97 COMP_Y_IN1
COMP_Y_IN2
98 S5
ATT_MON_OUT
99
100
1 L1_IN
2 R1_IN
3 P_EXP1
4 L2_IN
5 R2_IN
6 P_EXP2
7 L3_IN
8 R3_IN
9 AU_I_GND
10 L4_IN
11 R4_IN
TP4611
ATT_MON_OUT
GND GUARD
JA4601, CN4601
-> IC4601
TP4603
TP4605
TP4606
TP4616
TP4607
TP4608
TP4609
TP4610
JA4601
VKB1156-
V
INPUT_6
CVBS
C4606 YB 1.0/10
R4631 75 F
CN4601
AKP1298-
2
4
3
1
6
5
7
C4611 YB SS 0.01/16
C4607 YB 1.0/10
R4615 SS 10K
INPUT_5
S-VIDEO
R4632 75 F
R4616 75 F
C4647 YB SS 0.047/16
C4612 YB SS 0.01/16
D4601 ST
D4602 ST
D4603 ST
NO USE
GND
TP4604
TP4617
TP4618
TP4619


V+5V_A
C4621 YF SS 0.1/16
C4622 10/10 DCH1201- -T
C4613 105° 100/6.3
GND
SCL_AV
SDA_AV
from/to MAIN UCOM
C4623 YB SS 0.1/10
C4626 YB SS 0.1/10
C4659 SS ST
C4660 SS ST
NO USE
R4605 SS 47
R4606 SS 47
GY_SG
0.75Vp-p
MAIN_Y
MAIN_C
from/to VDEC
R4609 560 F
R4611 SS 22
R4612 180 F
R4610 560 F
R4613 SS 22
R4614 180 F
C4627 YF SS 0.1/16
Q4601
Q4602
GND
R4607 SS 220K
C4605 YB 1.0/10
TP4601
TP4602
R4608 SS 22
R4622 SS 22
TP4613
TP4612
R4623 SS 220K
C4608 YB 1.0/10
R4624 SS 22
R4625 SS 22
0.5Vp-p
SUB_Y
SUB_C
to VDEC
R4626 SS 220K
R4627 SS 22
TP4614
C4609 YB 1.0/10
R4628 SS 22
TP4615
C4610 YB 1.0/10
R4629 SS 220K
IC4601
R2S11002AFT-K
VIDEO SW
C_IN C1_DC Y_IN1 INPUT_VCC CVBS_IN1 CVBS_IN1_DET Y_IN1_DET CVBS_IN6 S4 CVBS_IN7 S1 CVBS1 SCLK SDATA
FBC_Y_OUT1
CVBS/Y_OUT1
OUT1_VCC
C_OUT1 OUT1_GND CVBS/Y_OUT2 OUT2_VCC FBC_Y_OUT2 C_OUT2 OUT2_GND CVBS_OUT4 FBC_CVBS_OUT4 CVBS_OUT5 FBC_CVBS_OUT5 R1_OUT L1_OUT R2_OUT L2_OUT R3_OUT L3_OUT AU_O_VCC R10_IN L10_IN NC
R9_IN
P_EXP3 L5_IN R5_IN AU_1/2_VCC L6_IN R6_IN AU_I_VCC L7_IN R7_IN P_EXP4 L8_IN R8_IN AU_O_GND L9_IN
V+9V_AU
GND
C4653 4.7/10 ACG1122- -T
C4657 F SS 0.1/16
C4658 10/16 DCH1165- -T
GND

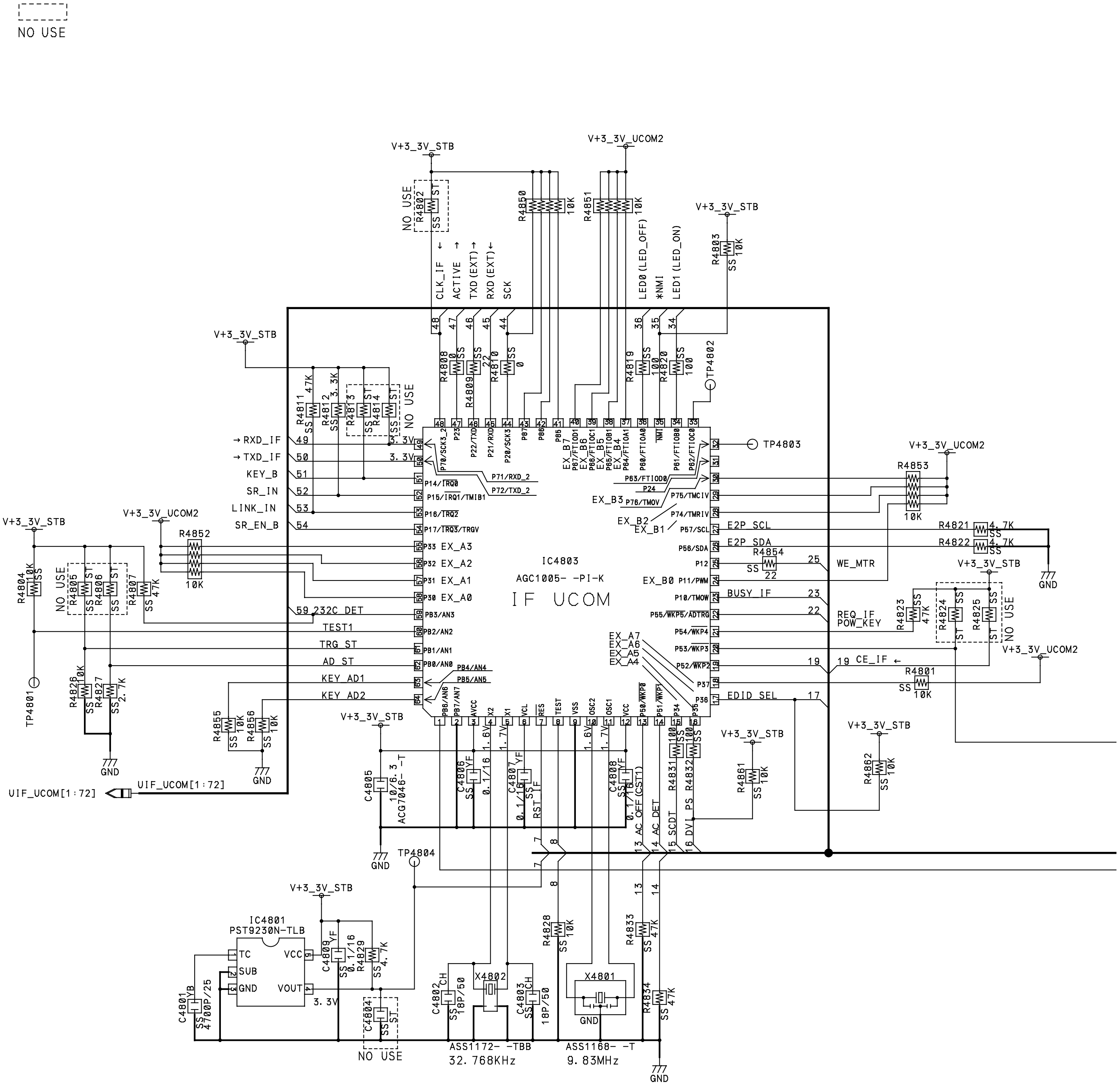
GND GUARD
IC4601(42,45Pin) -> IC5403
IC4601(47,49Pin) -> IC5402

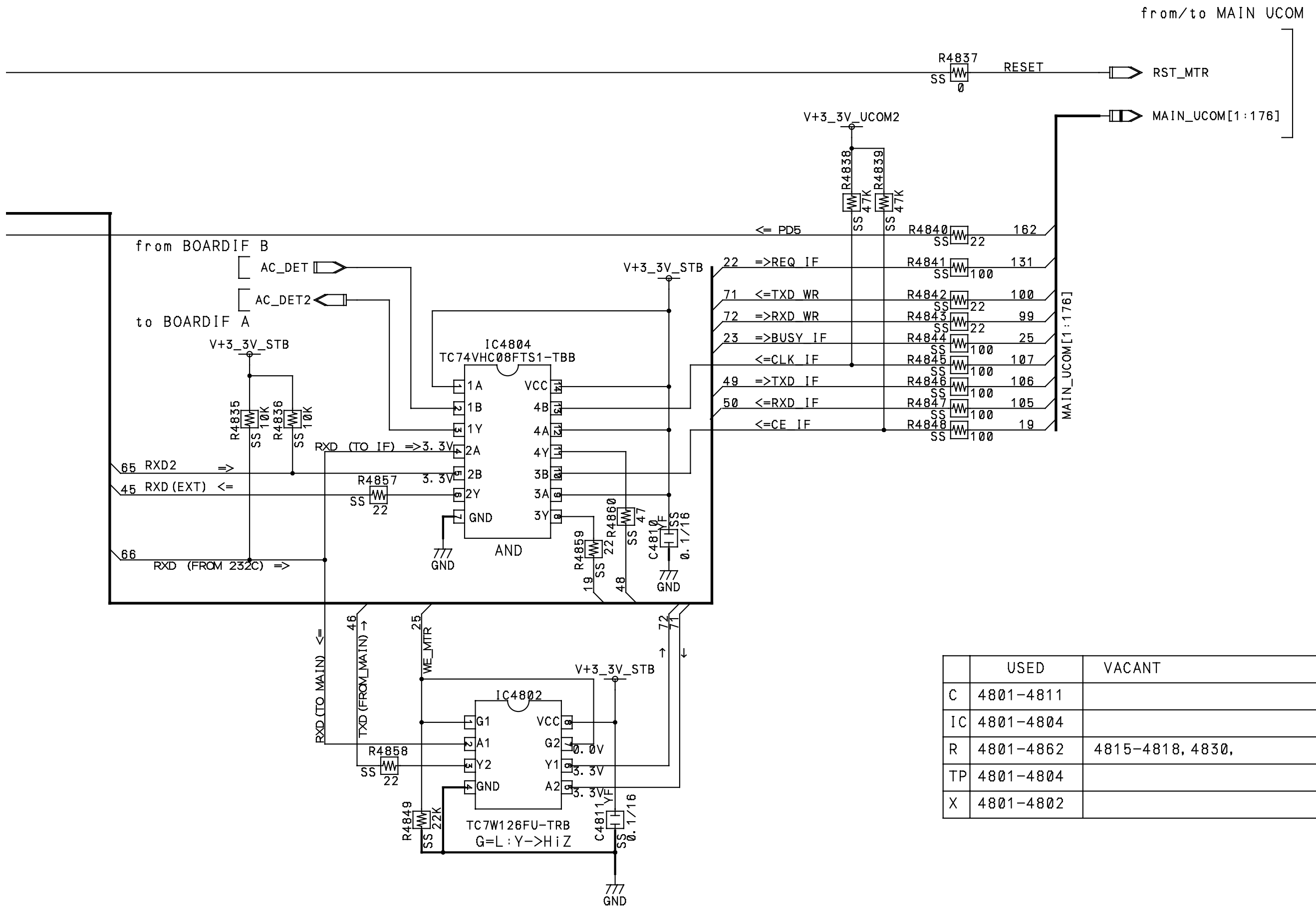
	USED	VACANT
C	4601-4660	4614-4620, 4624-4625, 4629-4631, 4633-4646, 4648-4652, 4654-4656,
CN	4601-4601	
D	4601-4603	
IC	4601-4601	
JA	4601-4601	
Q	4601-4602	
R	4601-4632	4620-4621, 4630,
TP	4601-4619	

1.39 FHD MAIN ASSY (5/16)

FHD MAIN ASSY (5/16)

- IF UCOM BLOCK


NO USE
V+3_3V_STB
V+3_3V_UCOM2
R4802
SS ST
CLK_IF
ACTIVE
TXD(EXT)
RXD(EXT)
SCK
R4850
10K
R4851
10K
LED0(LED_OFF)
*NMI
LED1(LED_ON)
R4803
SS 10K
TP4802
R4808 SS 0
R4809 SS 22
R4810 SS 0
R4819 SS 100
R4820 SS 100
R4811 SS 47K
R4812 SS 3.3K
R4813
R4814
SS ST
3.3V
RXD_IF 49
TXD_IF 50
KEY_B 51
SR_IN 52
LINK_IN 53
SR_EN_B 54
R4852
10K
R4804 10K SS
R4805 SS ST
R4806 SS ST
R4807 SS 47K
59 232C DET
TEST1
TRG ST
AD ST
KEY AD1
KEY AD2
TP4801
R4826 SS 10K
R4827 SS 2.7K
R4855 SS 10K
R4856 SS 10K
GND
UIF_UCOM[1:72]
IC4803
AGC1005- -PI-K
IF UCOM
P70/SCK3_2
P23
P22/TXD
P21/RXD
P20/SCK3
P87
P86
P85
EX_B7
P87/FTIOD1
EX_B6
P86/FTIOC1
EX_B5
P85/FTIOB1
EX_B4
P84/FTIOA1
P80/FTIOA0
NMI
P81/FTIOB0
P82/FTIOC0
P71/RXD_2
P72/TXD_2
P14/IRQ0
P15/IRQ1/TMIB1
P16/IRQ2
P17/IRQ3/TRGV
P33 EX_A3
P32 EX_A2
P31 EX_A1
P30 EX_A0
PB3/AN3
PB2/AN2
PB1/AN1
PB0/AN0
PB4/AN4
PB5/AN5
PB6/AN6
PB7/AN7
AVCC
X2
X1
VCL
RES
TEST
VSS
OSC2
OSC1
VCC
P50/WKP0
P51/WKP1
P34
P35
P36
P37
P52/WKP2
P53/WKP3
P54/WKP4
P55/WKP5/ADTRG
P10/TMOW
P11/PWM
P12
P56/SDA
P57/SCL
P74/TMRIV
P75/TMCIV
P76/TMOV
P24
P83/FTIOD0
EX_B3
EX_B2
EX_B1
EX_B0
EX_A7
EX_A6
EX_A5
EX_A4
TP4803
R4853
10K
R4821 4.7K SS
R4822 4.7K SS
E2P SCL
E2P SDA
R4854
SS 22
25 WE_MTR
BUSY IF 23
22 REQ_IF POW_KEY
R4823 SS 47K
R4824 SS ST
R4825 SS ST
19 CE_IF
R4801
SS 10K
EDID SEL 17
C4805 10/6.3 ACG7046- -T
C4806 SS YF 0.1/16
C4807 YF 0.1/16
RST IF
C4808 SS YF 0.1/16
1.6V
1.7V
R4831 SS 100
R4832 SS 100
13 AC OFF(CST1)
14 AC DET
15 SCDT
16 DVI PS
R4861 SS 10K
R4862 SS 10K
TP4804
IC4801
PST9230N-TLB
TC
SUB
GND
VCC
VOUT
3.3V
C4801 YB SS 4700P/25
C4809 YF SS 0.1/16
R4829 SS 4.7K
C4804 SS ST
R4828 SS 10K
R4833 SS 47K
R4834 SS 47K
C4802 CH SS 18P/50
X4802
C4803 CH SS 18P/50
ASS1172- -TBB
32.768KHz
X4801
ASS1168- -T
9.83MHz
7
8
13
14

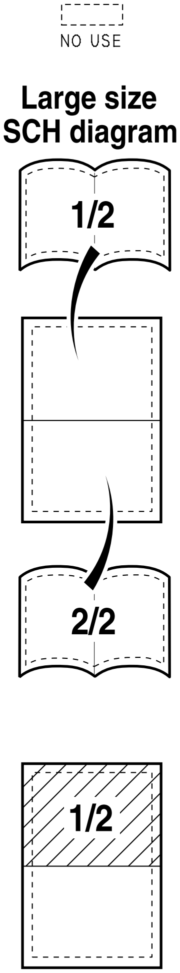

from/to MAIN UCOM
R4837
SS
0
RESET
RST_MTR
MAIN_UCOM[1:176]
V+3_3V_UCOM2
R4838
47K
SS
R4839
47K
SS
<= PD5
R4840 SS 22 162
22 =>REQ_IF R4841 SS 100 131
71 <=TXD_WR R4842 SS 22 100
72 =>RXD_WR R4843 SS 22 99
23 =>BUSY_IF R4844 SS 100 25
<=CLK_IF R4845 SS 100 107
49 =>TXD_IF R4846 SS 100 106
50 <=RXD_IF R4847 SS 100 105
<=CE_IF R4848 SS 100 19
MAIN_UCOM[1:176]
from BOARDIF B
AC_DET
AC_DET2
to BOARDIF A
V+3_3V_STB
R4835 SS 10K
R4836 SS 10K
65 RXD2 =>
45 RXD(EXT) <=
66 RXD (FROM 232C) =>
RXD (TO IF) =>3.3V
3.3V
R4857 SS 22
IC4804
TC74VHC08FTS1-TBB
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
1 2 3 4 5 6 7 14 13 12 11 10 9 8
AND
GND
R4860 SS 47
R4859 SS 22
C4810 YF SS 0.1/16
GND
19
48
RXD (TO MAIN) <=
46 TXD (FROM_MAIN) →
25 WE_MTR
72 ↑
71 ↓
V+3_3V_STB
IC4802
G1
A1
Y2
GND
VCC
G2
Y1
A2
1 2 3 4 8 7 6 5
0.0V
3.3V
3.3V
R4858 SS 22
R4849 SS 22K
TC7W126FU-TRB
G=L:Y->HiZ
C4811 YF SS 0.1/16
GND

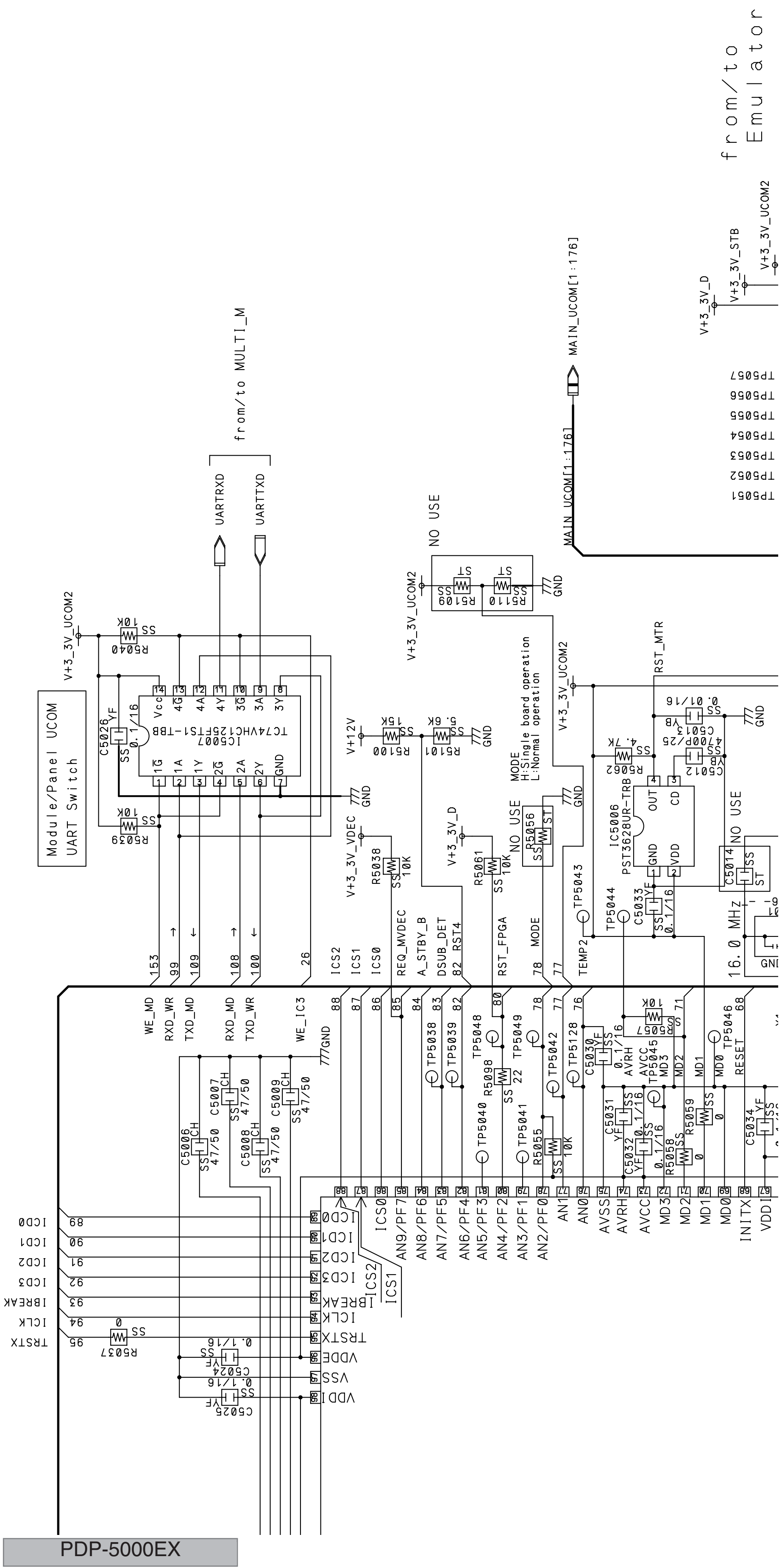
	USED	VACANT
C	4801-4811	
IC	4801-4804	
R	4801-4862	4815-4818, 4830,
TP	4801-4804	
X	4801-4802	

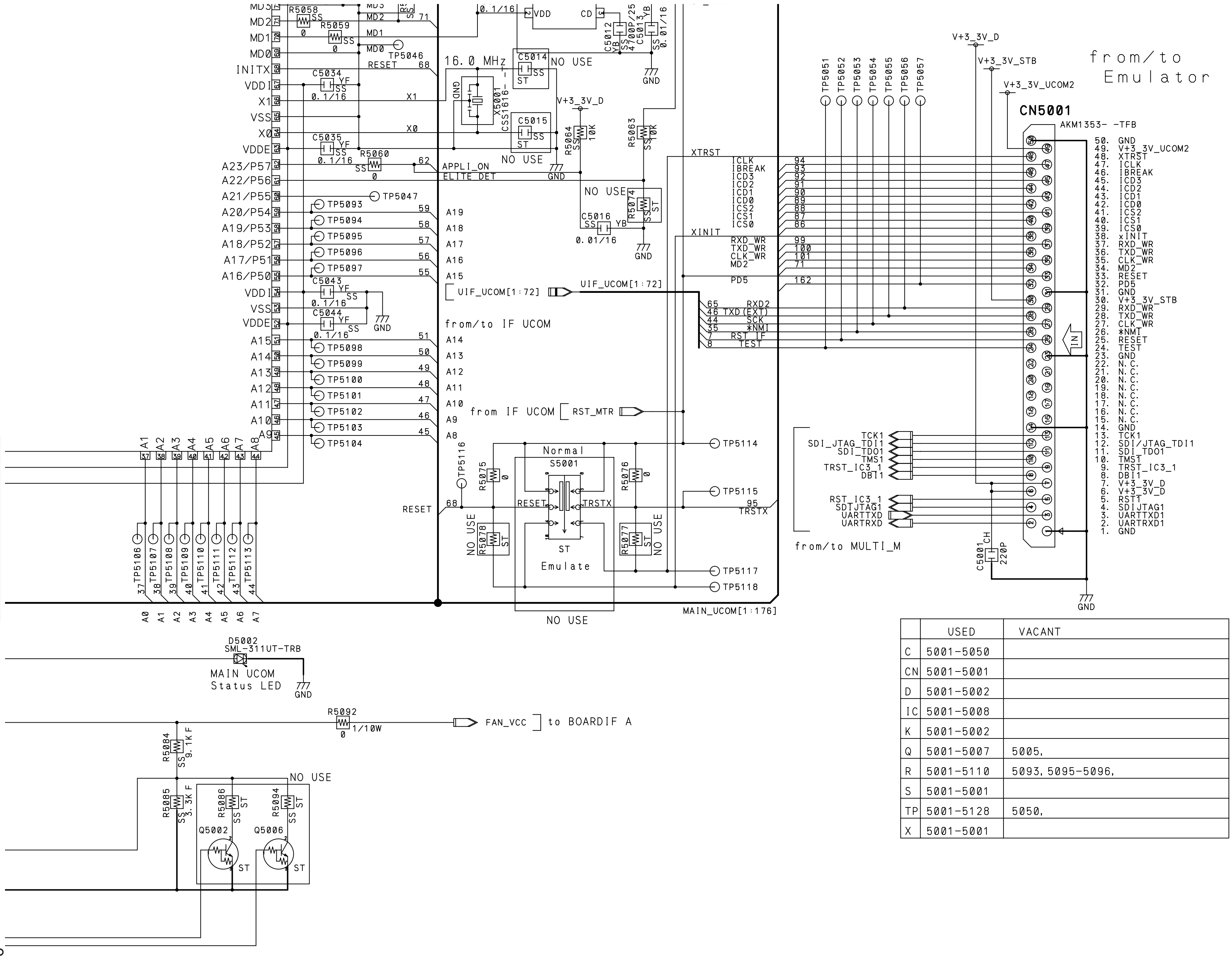
1.40 FHD MAIN ASSY (6/16)

FHD MAIN ASSY (6/16)

- MAIN UCOM BLOCK


NO USE
Large size
SCH diagram
1/2
2/2
1/2


from/to
Emulator
V+3_3V_STB
V+3_3V_UCOM2
V+3_3V_D
MAIN_UCOM[1:176]
TP5051
TP5052
TP5053
TP5054
TP5055
TP5056
TP5057
from/to MULTI_M
UARTRXD
UARTTXD
NO USE
R5109
R5110
SS
ST
GND
Module/Panel UCOM
UART Switch
R5040
10K
R5039
10K
C5026
0.1/16
YF
IC5007
TC74VHC125FTS1-TBB
Vcc
4G
4A
4Y
3G
3A
3Y
1G
1A
1Y
2G
2A
2Y
GND
V+12V
R5100
15K
R5101
5.6K
MODE
H:Single board operation
L:Normal operation
RST_MTR
R5062
4.7K
C5013
0.01/16
C5012
4700P/25
IC5006
PST3628UR-TRB
OUT
CD
GND
VDD
C5014
NO USE
C5033
0.1/16
R5056
R5061
10K
R5038
10K
V+3_3V_VDEC
TP5043
TP5044
16.0 MHz
153
99
109
108
100
26
WE_MD
RXD_WR
TXD_MD
RXD_MD
TXD_WR
WE_IC3
ICS2
ICS1
ICS0
REQ_MVDEC
A_STBY_B
DSUB_DET
82 RST4
RST_FPGA
78 MODE
77
TEMP2
C5006
C5007
C5008
C5009
47/50
CH
TP5038
TP5039
TP5048
TP5040
TP5041
TP5049
TP5042
TP5128
R5098
22
R5055
10K
C5030
0.1/16
C5031
C5032
TP5045
R5057
10K
R5058
0
R5059
0
TP5046
RESET
C5034
AVRH
AVCC
MD3
MD2
MD1
MD0
88
87
86
85
84
83
82
81
80
79
78
77
76
75
74
73
72
71
70
69
68
67
ICS0
AN9/PF7
AN8/PF6
AN7/PF5
AN6/PF4
AN5/PF3
AN4/PF2
AN3/PF1
AN2/PF0
AN1
AN0
AVSS
AVRH
AVCC
MD3
MD2
MD1
MD0
INITX
VDDI
ICD0
ICD1
ICD2
ICD3
IBREAK
ICLK
TRSTX
VDDE
VSS
VDDI
ICS2
ICS1
89
90
91
92
93
94
95
96
97
98
R5037
0
C5024
0.1/16
C5025
0.1/16
YF
SS



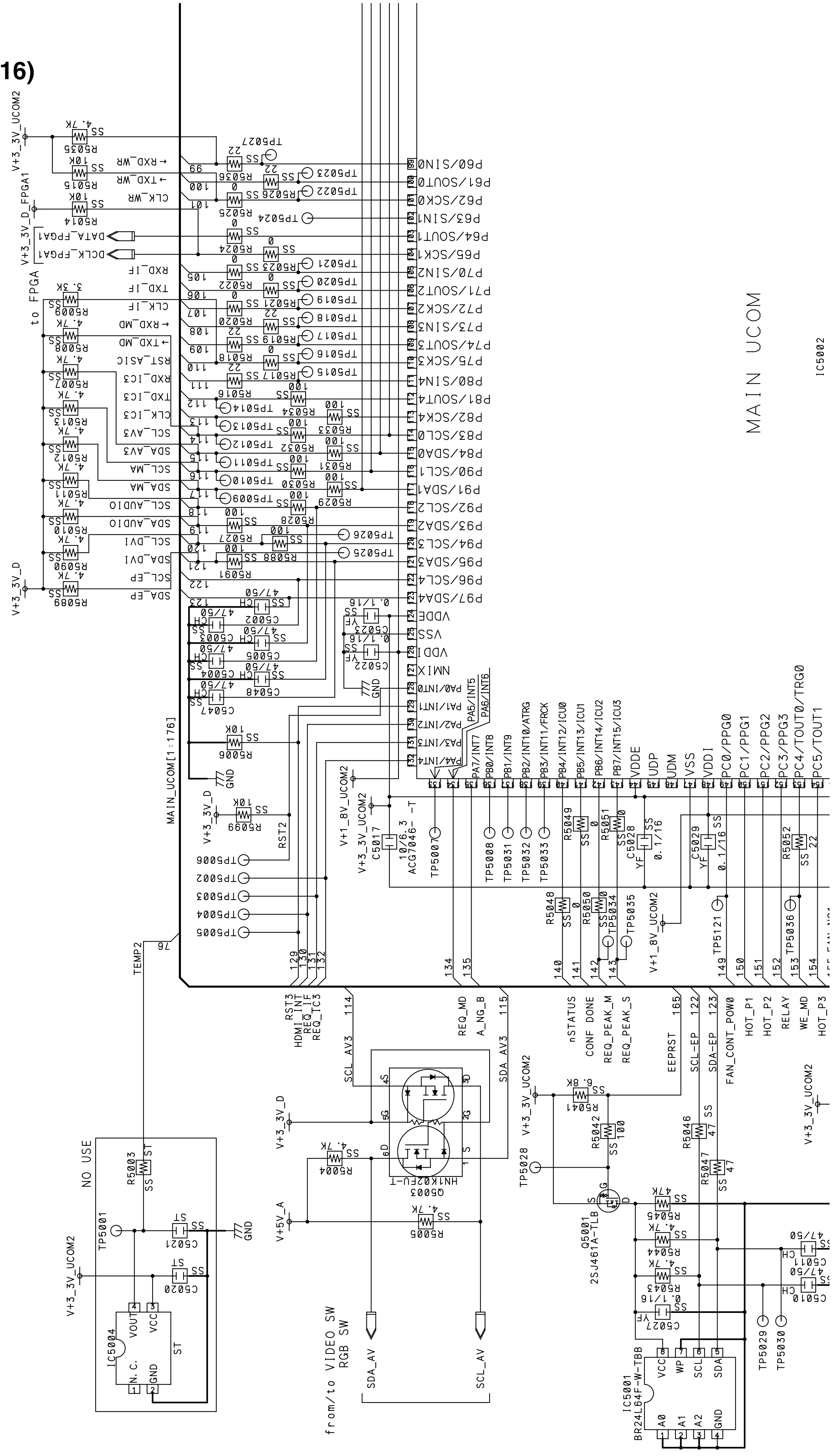
from/to Emulator
CN5001
AKM1353- -TFB
50. GND
49. V+3_3V_UCOM2
48. XTRST
47. ICLK
46. IBREAK
45. ICD3
44. ICD2
43. ICD1
42. ICD0
41. ICS2
40. ICS1
39. ICS0
38. xINIT
37. RXD_WR
36. TXD_WR
35. CLK_WR
34. MD2
33. RESET
32. PD5
31. GND
30. V+3_3V_STB
29. RXD_WR
28. TXD_WR
27. CLK_WR
26. *NMI
25. RESET
24. TEST
23. GND
22. N.C.
21. N.C.
20. N.C.
19. N.C.
18. N.C.
17. N.C.
16. N.C.
15. N.C.
14. GND
13. TCK1
12. SDI/JTAG_TDI1
11. SDI_TDO1
10. TMST
9. TRST_IC3_1
8. DBI1
7. V+3_3V_D
6. V+3_3V_D
5. RSTT
4. SDIJTAG1
3. UARTTXD1
2. UARTRXD1
1. GND
IN
V+3_3V_D
V+3_3V_STB
V+3_3V_UCOM2
GND
C5001 CH 220P
TP5051
TP5052
TP5053
TP5054
TP5055
TP5056
TP5057
TCK1
SDI_JTAG_TDI1
SDI_TDO1
TMS1
TRST_IC3_1
DBI1
RST_IC3_1
SDIJTAG1
UARTTXD
UARTRXD
from/to MULTI_M
XTRST
ICLK
IBREAK
ICD3
ICD2
ICD1
ICD0
ICS2
ICS1
ICS0
XINIT
RXD_WR
TXD_WR
CLK_WR
MD2
PD5
94
93
92
91
90
89
88
87
86
99
100
101
71
162
65 RXD2
46 TXD(EXT)
44 SCK
35 *NMI
7 RST_IF
8 TEST
UIF_UCOM[1:72]
from/to IF UCOM
from IF UCOM
RST_MTR
TP5114
TP5115
95 TRSTX
TP5117
TP5118
MAIN_UCOM[1:176]
Normal
S5001
RESET
TRSTX
ST
Emulate
NO USE
R5075 0
R5076 0
R5077 ST
R5078 ST
TP5116
RESET
68
16.0 MHz
X5001 CSS1616- -
C5014 SS ST
C5015 SS ST
NO USE
VDD
CD
C5012 YB SS 4700P/25
C5013 YB SS 0.01/16
0.1/16
V+3_3V_D
R5064 SS 10K
R5063 SS 10K
R5074 SS ST
C5016 SS YB 0.01/16
APPLI_ON
ELITE_DET
62
MD3
MD2
MD1
MD0
INITX
VDDI
X1
VSS
X0
VDDE
A23/P57
A22/P56
A21/P55
A20/P54
A19/P53
A18/P52
A17/P51
A16/P50
VDDI
VSS
VDDE
A15
A14
A13
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
R5058 SS 0
R5059 SS 0
TP5046
MD0
RESET
71
C5034 YF SS 0.1/16
C5035 YF SS 0.1/16
R5060 SS 0
C5043 YF SS 0.1/16
C5044 YF SS 0.1/16
TP5047
TP5093
TP5094
TP5095
TP5096
TP5097
TP5098
TP5099
TP5100
TP5101
TP5102
TP5103
TP5104
59 A19
58 A18
57 A17
56 A16
55 A15
51 A14
50 A13
49 A12
48 A11
47 A10
46 A9
45 A8
TP5106
TP5107
TP5108
TP5109
TP5110
TP5111
TP5112
TP5113
A0
A1
A2
A3
A4
A5
A6
A7
D5002
SML-311UT-TRB
MAIN UCOM
Status LED
GND
R5092 0 1/10W
FAN_VCC
to BOARDIF A
R5084 SS 9.1K F
R5085 SS 3.3K F
R5086 SS ST
R5094 SS ST
Q5002 ST
Q5006 ST
NO USE
5
6
7
8
A
B
C
D
E
F

	USED	VACANT
C	5001-5050	
CN	5001-5001	
D	5001-5002	
IC	5001-5008	
K	5001-5002	
Q	5001-5007	5005,
R	5001-5110	5093, 5095-5096,
S	5001-5001	
TP	5001-5128	5050,
X	5001-5001	

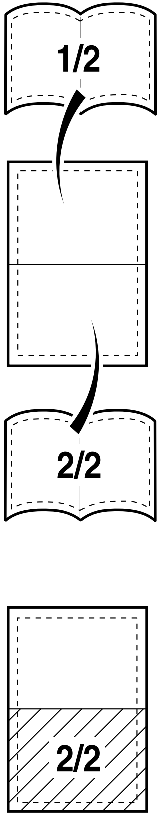
FHD MAIN ASSY (6/16)

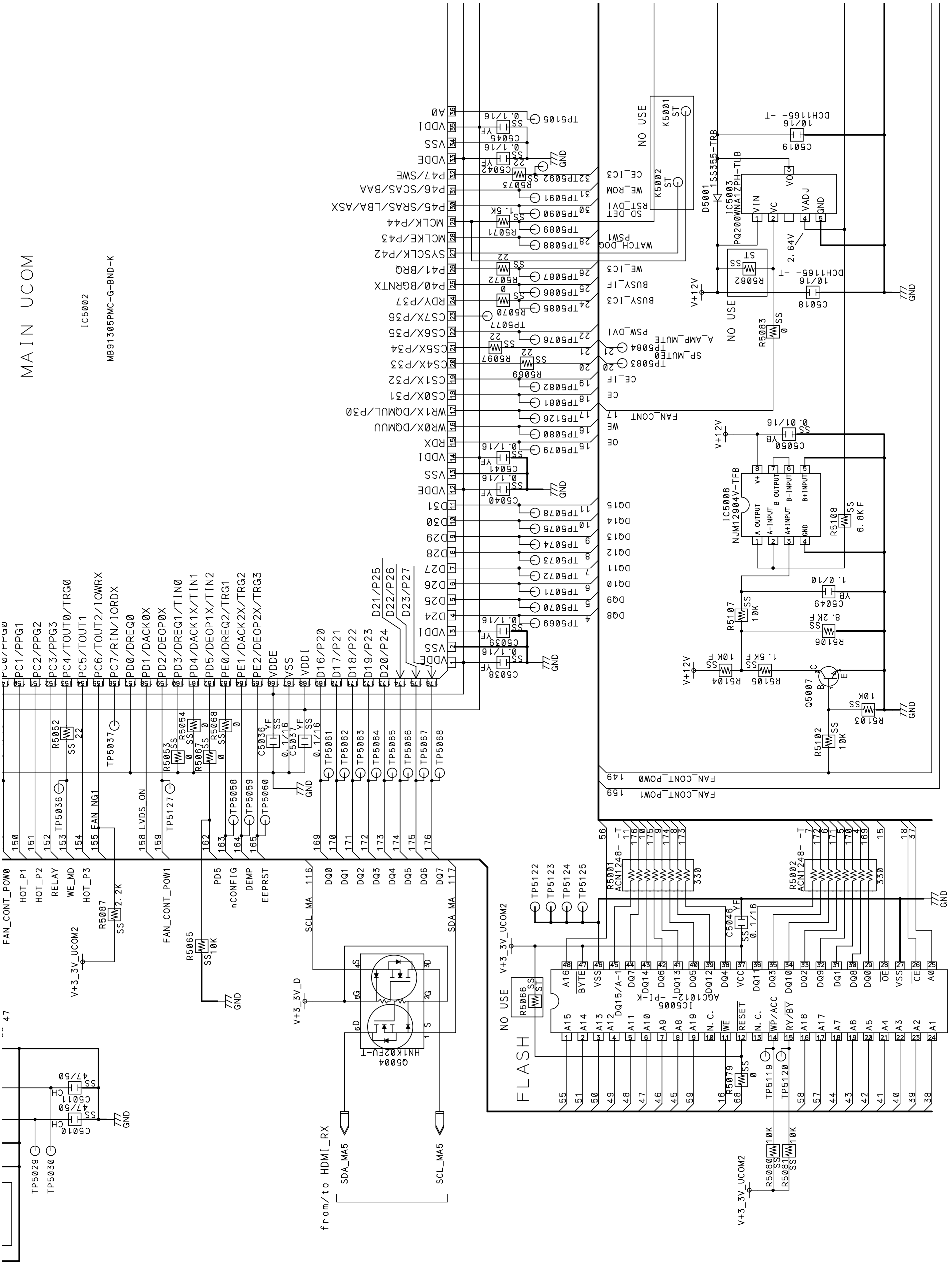
- MAIN UCOM BLOCK

NO USE


MAIN UCOM
IC5002
P60/SIN0
P61/SOUT0
P62/SCK0
P63/SIN1
P64/SOUT1
P65/SCK1
P70/SIN2
P71/SOUT2
P72/SCK2
P73/SIN3
P74/SOUT3
P75/SCK3
P80/SIN4
P81/SOUT4
P82/SCK4
P83/SCL0
P84/SDA0
P90/SCL1
P91/SDA1
P92/SCL2
P93/SDA2
P94/SCL3
P95/SDA3
P96/SCL4
P97/SDA4
VDDE
VSS
VDDI
NMIX
PA0/INT0
PA1/INT1
PA2/INT2
PA3/INT3
PA4/INT4
PA5/INT5
PA6/INT6
PA7/INT7
PB0/INT8
PB1/INT9
PB2/INT10/ATRG
PB3/INT11/FRCK
PB4/INT12/ICU0
PB5/INT13/ICU1
PB6/INT14/ICU2
PB7/INT15/ICU3
VDDE
UDP
UDM
VSS
VDDI
PC0/PPG0
PC1/PPG1
PC2/PPG2
PC3/PPG3
PC4/TOUT0/TRG0
PC5/TOUT1
V+3_3V_UCOM2
V+3_3V_D_FPGA1
to FPGA
V+3_3V_D
RXD_WR
TXD_WR
CLK_WR
DATA_FPGA1
DCLK_FPGA1
RXD_IF
TXD_IF
CLK_IF
RXD_MD
TXD_MD
RST_ASIC
RXD_IC3
TXD_IC3
CLK_IC3
SCL_AV3
SDA_AV3
SCL_MA
SDA_MA
SCL_AUDIO
SDA_AUDIO
SCL_DVI
SDA_DVI
SCL_EP
SDA_EP
MAIN_UCOM[1:176]
RST2
TEMP2
V+1_8V_UCOM2
ACG7046- -T
RST3
HDMI_INT
REQ_IF
REQ_TC3
REQ_MD
A_NG_B
nSTATUS
CONF DONE
REQ_PEAK_M
REQ_PEAK_S
EEPRST
SCL-EP
SDA-EP
FAN_CONT_POW0
HOT_P1
HOT_P2
RELAY
WE_MD
HOT_P3
SCL_AV3
SDA_AV3
Q5003
HN1K02FU-T
V+5V_A
from/to VIDEO SW
RGB SW
SDA_AV
SCL_AV
NO USE
IC5004
N.C.
VOUT
VCC
GND
ST
Q5001
2SJ461A-TLB
IC5001
BR24L64F-W-TBB
VCC
WP
SCL
SDA
A0
A1
A2
GND
V+3_3V_UCOM2

Large size SCH diagram




MAIN UCOM
IC5002
MB91305PMC-G-BND-K
FLASH
IC5005
AGC1012- -P1-K
IC5003
PQ200WNA1ZPH-TLB
IC5008
NJM12904V-TFB
Q5004
HN1K02FU-T
Q5007
D5001
1SS355-TRB
K5001
K5002
R5001
ACN1248- -T
R5002
ACN1248- -T
NO USE
FAN_CONT_POW0
FAN_CONT_POW1
HOT_P1
HOT_P2
RELAY
WE_MD
HOT_P3
PD5
nCONFIG
DEMP
EEPRST
FAN_NG1
LVDS_ON
SCL_MA
SDA_MA
SDA_MA5
SCL_MA5
from/to HDMI_RX
V+3_3V_UCOM2
V+3_3V_D
V+12V
GND
CE_IC3
WE_ROM
RST_DVI
SD_DET
WATCH DOG
PSW1
WE_IC3
BUSY_IF
BUSY_IC3
PSW_DVI
A_AMP_MUTE
SP_MUTE0
CE_IF
CE
FAN_CONT
WE
OE
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
A0
VDDI
VSS
VDDE
P47/SWE
P46/SCAS/BAA
P45/SRAS/LBA/ASX
MCLK/P44
MCLKE/P43
SYSCLK/P42
P41/BRQ
P40/BGRNTX
RDY/P37
CS7X/P36
CS6X/P35
CS5X/P34
CS4X/P33
CS1X/P32
CS0X/P31
WR1X/DQMUL/P30
WR0X/DQMUU
RDX
D31
D30
D29
D28
D27
D26
D25
D24
D21/P25
D22/P26
D23/P27
PC1/PPG1
PC2/PPG2
PC3/PPG3
PC4/TOUT0/TRG0
PC5/TOUT1
PC6/TOUT2/IOWRX
PC7/RIN/IORDX
PD0/DREQ0
PD1/DACK0X
PD2/DEOP0X
PD3/DREQ1/TIN0
PD4/DACK1X/TIN1
PD5/DEOP1X/TIN2
PE0/DREQ2/TRG1
PE1/DACK2X/TRG2
PE2/DEOP2X/TRG3
D16/P20
D17/P21
D18/P22
D19/P23
D20/P24
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
A16
BYTE
DQ15/A-1
RESET
WP/ACC
RY/BY
VCC
2.64V
DCH1165- -T
10/16
0.1/16
0.01/16
1.0/10
47/50
330
10K
6.8K F
8.2K F
1.5K F
10K F
2.2K
R5052
R5053
R5054
R5065
R5067
R5068
R5069
R5070
R5071
R5072
R5073
R5079
R5080
R5081
R5082
R5083
R5087
R5097
R5102
R5103
R5104
R5105
R5106
R5107
R5108
C5010
C5011
C5018
C5019
C5036
C5037
C5038
C5039
C5040
C5041
C5042
C5045
C5046
C5049
C5050
R5066
TP5029
TP5030
TP5036
TP5037
TP5058
TP5059
TP5060
TP5061
TP5062
TP5063
TP5064
TP5065
TP5066
TP5067
TP5068
TP5069
TP5070
TP5071
TP5072
TP5073
TP5074
TP5075
TP5076
TP5077
TP5078
TP5079
TP5080
TP5081
TP5082
TP5083
TP5084
TP5085
TP5086
TP5087
TP5088
TP5089
TP5090
TP5091
TP5092
TP5105
TP5119
TP5120
TP5122
TP5123
TP5124
TP5125
TP5126
TP5127

A

B

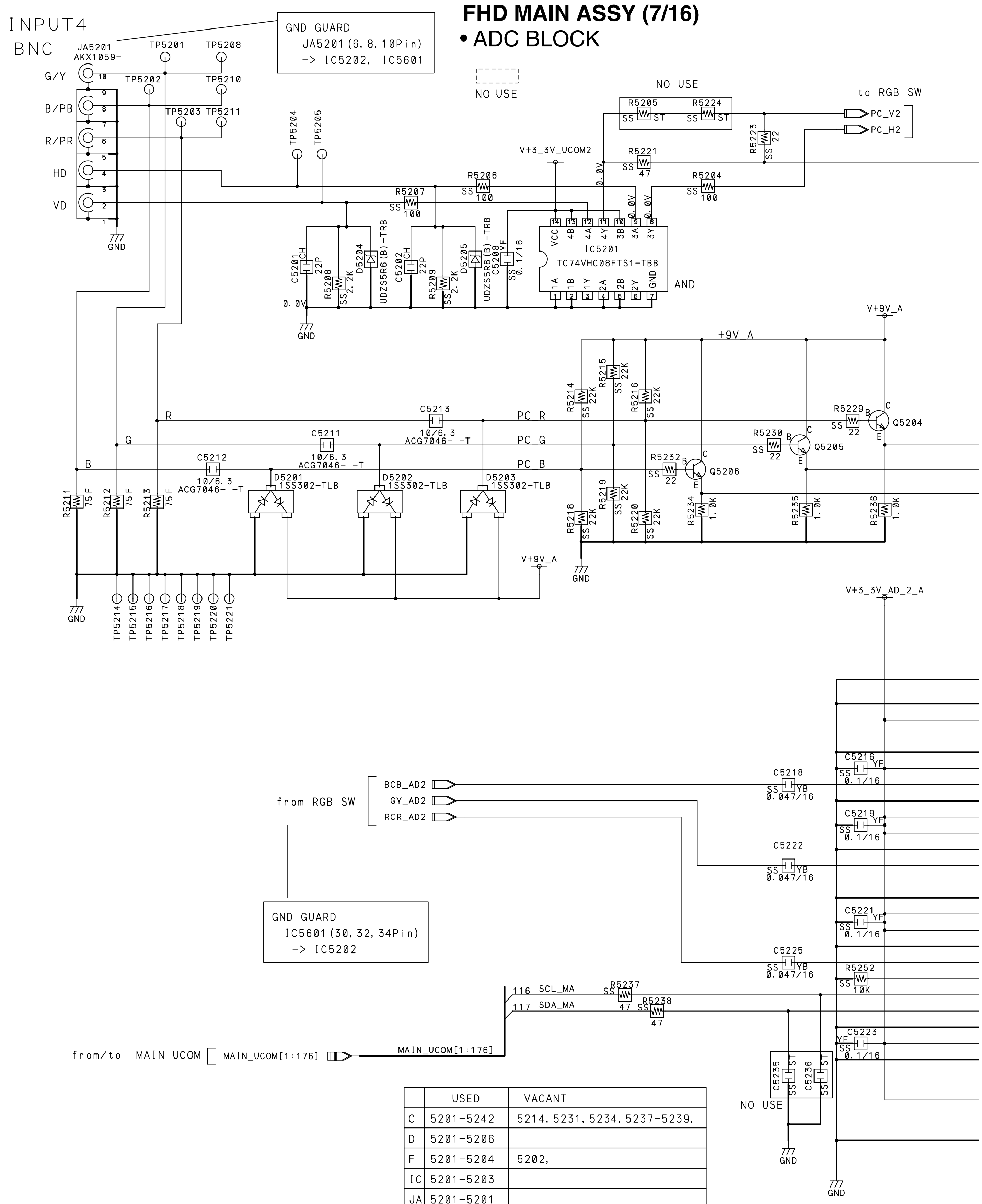
C

D

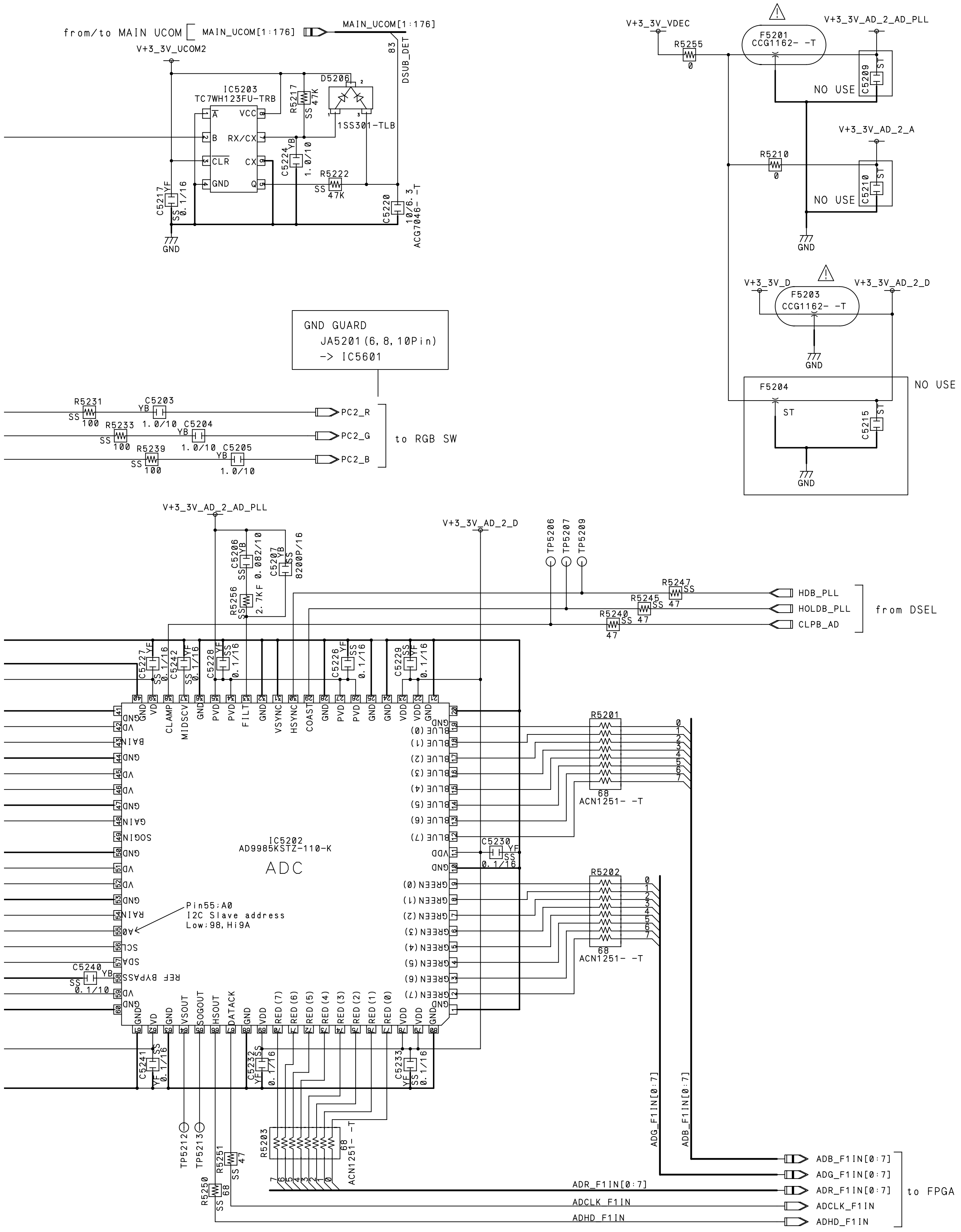
E

F

1.41 FHD MAIN ASSY (7/16)


FHD MAIN ASSY (7/16)
• ADC BLOCK
NO USE
INPUT4
BNC
JA5201
AKX1059-
G/Y
B/PB
R/PR
HD
VD
GND GUARD
JA5201(6, 8, 10Pin)
-> IC5202, IC5601
TP5201
TP5208
TP5202
TP5210
TP5203
TP5211
TP5204
TP5205
NO USE
R5205
R5224
to RGB SW
PC_V2
PC_H2
R5223
V+3_3V_UCOM2
R5221
R5206
R5207
R5204
IC5201
TC74VHC08FTS1-TBB
AND
C5201
C5202
R5208
R5209
D5204
D5205
UDZS5R6(B)-TRB
C5208
GND
V+9V_A
+9V_A
R5214
R5215
R5216
R5229
Q5204
R5230
Q5205
R5232
Q5206
C5213
C5211
C5212
PC_R
PC_G
PC_B
R
G
B
D5201
D5202
D5203
1SS302-TLB
ACG7046- -T
R5211
R5212
R5213
R5218
R5219
R5220
R5234
R5235
R5236
TP5214
TP5215
TP5216
TP5217
TP5218
TP5219
TP5220
TP5221
V+3_3V_AD_2_A
from RGB SW
BCB_AD2
GY_AD2
RCR_AD2
C5216
C5218
C5219
C5222
C5221
C5225
R5252
C5223
GND GUARD
IC5601(30, 32, 34Pin)
-> IC5202
SCL_MA
SDA_MA
R5237
R5238
from/to MAIN UCOM
MAIN_UCOM[1:176]
C5235
C5236
NO USE

	USED	VACANT
C	5201-5242	5214, 5231, 5234, 5237-5239,
D	5201-5206	
F	5201-5204	5202,
IC	5201-5203	
JA	5201-5201	
Q	5204-5206	
R	5201-5256	5225-5228, 5241-5244, 5246, 5248-5249, 5253-5254,
TP	5201-5221	


from/to MAIN UCOM
MAIN_UCOM[1:176]
83
DSUB_DET
V+3_3V_UCOM2
IC5203
TC7WH123FU-TRB
A
VCC
B
RX/CX
CLR
CX
GND
Q
R5217 SS 47K
D5206
1SS301-TLB
C5224 YB 1.0/10
R5222 SS 47K
C5217 YF SS 0.1/16
C5220 10/6.3 ACG7046-T
GND
V+3_3V_VDEC
R5255 0
F5201 CCG1162-T
V+3_3V_AD_2_AD_PLL
C5209 ST
NO USE
V+3_3V_AD_2_A
R5210 0
C5210 ST
NO USE
GND
V+3_3V_D
F5203 CCG1162-T
V+3_3V_AD_2_D
GND
F5204
ST
C5215 ST
NO USE
GND
GND GUARD
JA5201(6,8,10Pin)
-> IC5601
R5231 SS 100
C5203 YB 1.0/10
R5233 SS 100
C5204 YB 1.0/10
R5239 SS 100
C5205 YB 1.0/10
PC2_R
PC2_G
PC2_B
to RGB SW
V+3_3V_AD_2_AD_PLL
C5206 SS YB 0.082/10
C5207 YB SS 8200P/16
R5256 SS 2.7KF
V+3_3V_AD_2_D
TP5206
TP5207
TP5209
R5247 SS 47
R5245 SS 47
R5240 SS 47
HDB_PLL
HOLDB_PLL
CLPB_AD
from DSEL
C5227 YF SS 0.1/16
C5242 YF SS 0.1/16
C5228 YF SS 0.1/16
C5226 YF SS 0.1/16
C5229 SS YF 0.1/16
GND VD CLAMP MIDSCV GND PVD PVD FILT GND VSYNC HSYNC COAST GND PVD PVD GND GND VDD VDD GND
GND VD BAIN GND VD VD GND GAIN SOGIN GND VD VD GND RAIN A0 SCL SDA REF BYPASS VD GND
GND BLUE(0) BLUE(1) BLUE(2) BLUE(3) BLUE(4) BLUE(5) BLUE(6) BLUE(7) VDD GND GREEN(0) GREEN(1) GREEN(2) GREEN(3) GREEN(4) GREEN(5) GREEN(6) GREEN(7) GND
GND VD GND VSOUT SOGOUT HSOUT DATACK GND VDD RED(7) RED(6) RED(5) RED(4) RED(3) RED(2) RED(1) RED(0) VDD VDD GND
IC5202
AD9985KSTZ-110-K
ADC
Pin55:A0
I2C Slave address
Low:98,Hi9A
C5230 YF SS 0.1/16
R5201 68 ACN1251-T
R5202 68 ACN1251-T
R5203 68 ACN1251-T
C5240 YB SS 0.1/10
C5241 YF SS 0.1/16
C5232 YF SS 0.1/16
C5233 YF SS 0.1/16
TP5212
TP5213
R5251 SS 47
R5250 SS 68
ADG_F1IN[0:7]
ADB_F1IN[0:7]
ADR_F1IN[0:7]
ADCLK_F1IN
ADHD_F1IN
ADB_F1IN[0:7]
ADG_F1IN[0:7]
ADR_F1IN[0:7]
ADCLK_F1IN
ADHD_F1IN
to FPGA

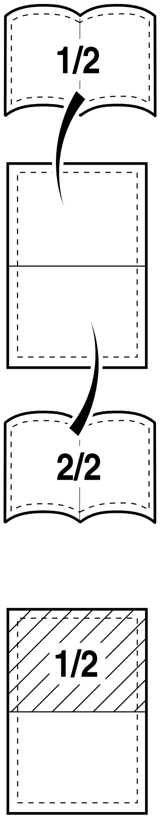
1.42 FHD MAIN ASSY (8/16)

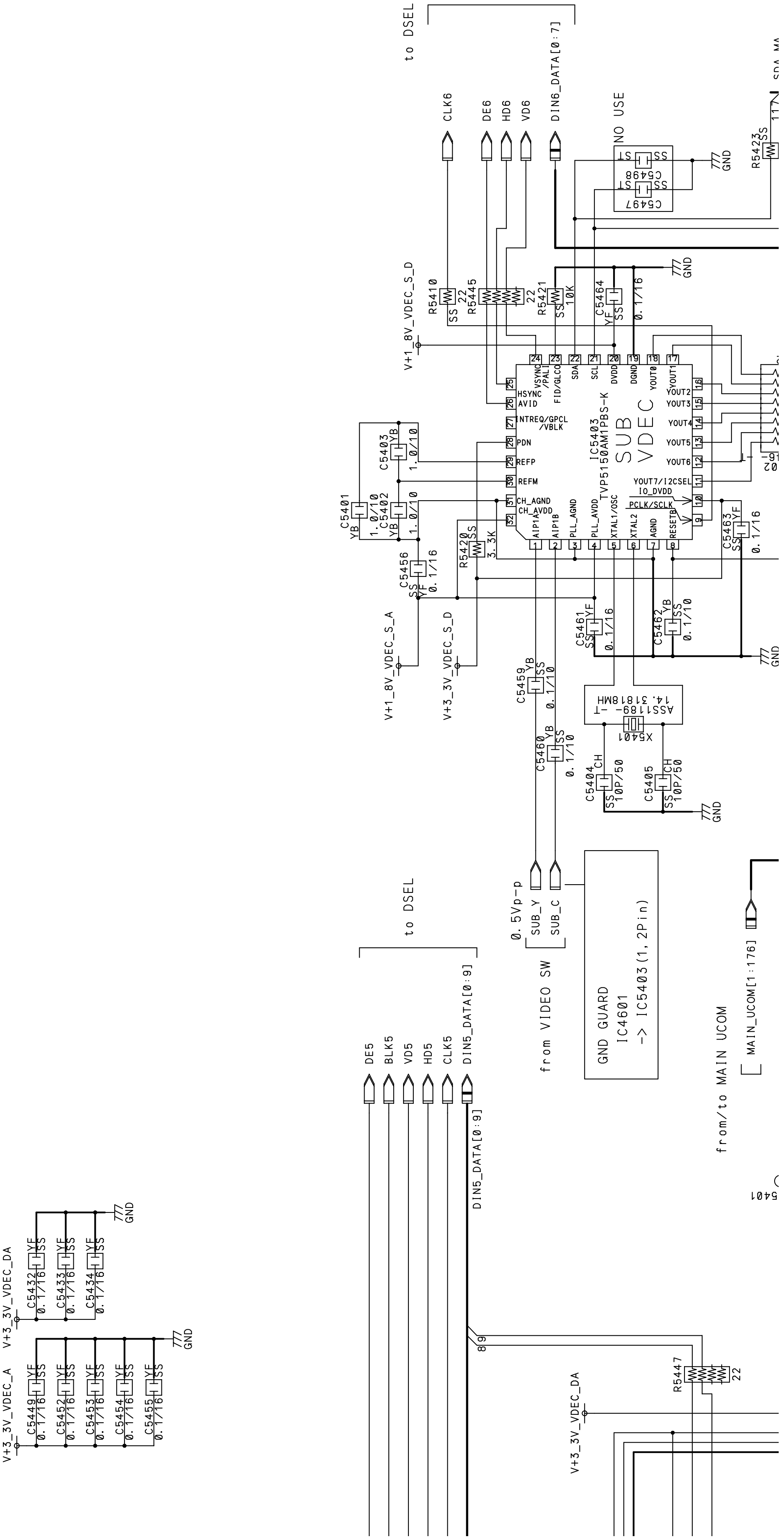
FHD MAIN ASSY (8/16)

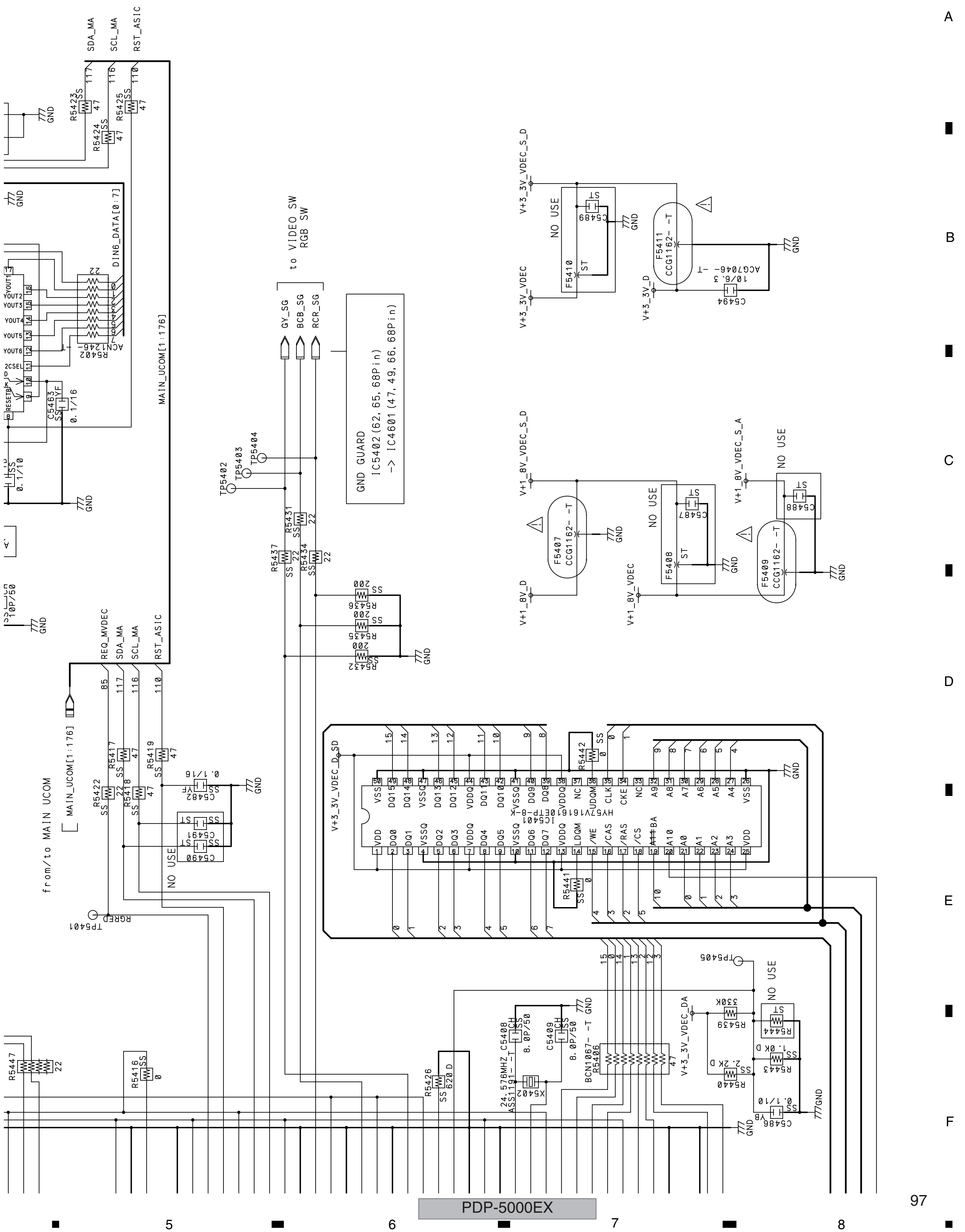
- VDEC BLOCK

NO USE

Large size SCH diagram




to DSEL
CLK6
DE6
HD6
VD6
DIN6_DATA[0:7]
NO USE
C5497
C5498
R5423
GND
V+1_8V_VDEC_S_D
R5410 22
R5445 22
R5421 10K
C5464 0.1/16
IC5403
TVP5150AM1PBS-K
SUB VDEC
HSYNC
AVID
INTREQ/GPCL/VBLK
PDN
REFP
REFM
CH_AGND
CH_AVDD
AIP1A
AIP1B
PLL_AGND
PLL_AVDD
XTAL1/OSC
XTAL2
AGND
RESETB
PCLK/SCLK
IO_DVDD
YOUT7/I2CSEL
YOUT6
YOUT5
YOUT4
YOUT3
YOUT2
YOUT1
YOUT0
DGND
DVDD
SCL
SDA
FID/GLCO
VSYNC/PALI
C5403 1.0/10
C5401 1.0/10
C5402 1.0/10
R5420 3.3K
C5456 0.1/16
C5463 0.1/16
C5461 0.1/16
C5462 0.1/10
V+1_8V_VDEC_S_A
V+3_3V_VDEC_S_D
C5459 0.1/10
C5460 0.1/10
X5401
ASS1189-T
14.31818MH
C5404 10P/50
C5405 10P/50
0.5Vp-p
SUB_Y
SUB_C
from VIDEO SW
GND GUARD
IC4601
-> IC5403(1, 2Pin)
from/to MAIN UCOM
MAIN_UCOM[1:176]
to DSEL
DE5
BLK5
VD5
HD5
CLK5
DIN5_DATA[0:9]
V+3_3V_VDEC_DA
C5432 0.1/16
C5433 0.1/16
C5434 0.1/16
V+3_3V_VDEC_A
C5449 0.1/16
C5452 0.1/16
C5453 0.1/16
C5454 0.1/16
C5455 0.1/16
R5447 22
V+3_3V_VDEC_DA
GND

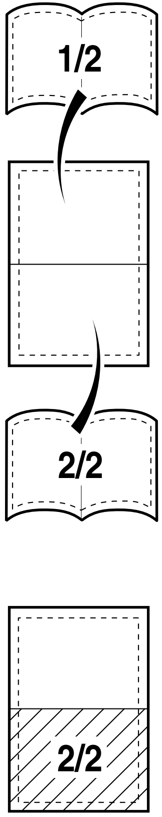

SDA_MA
SCL_MA
RST_ASIC
R5423
R5424
R5425
47
GND
DIN6_DATA[0:7]
R5402
ACN1246-T
22
YOUT1
YOUT2
YOUT3
YOUT4
YOUT5
YOUT6
2CSEL
RESETB
C5463
0.1/16
0.1/10
10P/50
MAIN_UCOM[1:176]
to VIDEO SW
RGB SW
GY_SG
BCB_SG
RCR_SG
GND GUARD
IC5402(62,65,68Pin)
-> IC4601(47,49,66,68Pin)
TP5402
TP5403
TP5404
R5431
R5434
R5437
R5436
R5435
R5432
200
REQ_MVDEC
85
117
116
110
from/to MAIN UCOM
R5417
R5418
R5419
R5422
C5482
C5490
C5491
NO USE
TP5401
RGRED
V+3_3V_VDEC_S_D
V+3_3V_VDEC
V+3_3V_D
F5410
F5411
CCG1162- -T
C5489
C5494
ACG7046- -T
10/6.3
V+1_8V_VDEC_S_D
V+1_8V_VDEC
V+1_8V_D
V+1_8V_VDEC_S_A
F5407
F5408
F5409
C5487
C5488
ST
V+3_3V_VDEC_D_SD
IC5401
HY57V161610ETP-8-X
VSS
DQ15
DQ14
VSSQ
DQ13
DQ12
VDDQ
DQ11
DQ10
DQ9
DQ8
NC
UDQM
CLK
CKE
A9
A8
A7
A6
A5
A4
VDD
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
LDQM
/WE
/CAS
/RAS
/CS
A11 BA
A10
A0
A1
A2
A3
R5441
R5442
TP5405
330K
R5439
R5444
R5443
1.0K D
R5440
2.2K D
C5486
0.1/10
V+3_3V_VDEC_DA
BCN1067- -T
R5406
C5408
C5409
8.0P/50
X5402
24.576MHZ
ASS1191- -T
R5426
620 D
R5447
R5416
0
A
B
C
D
E
F

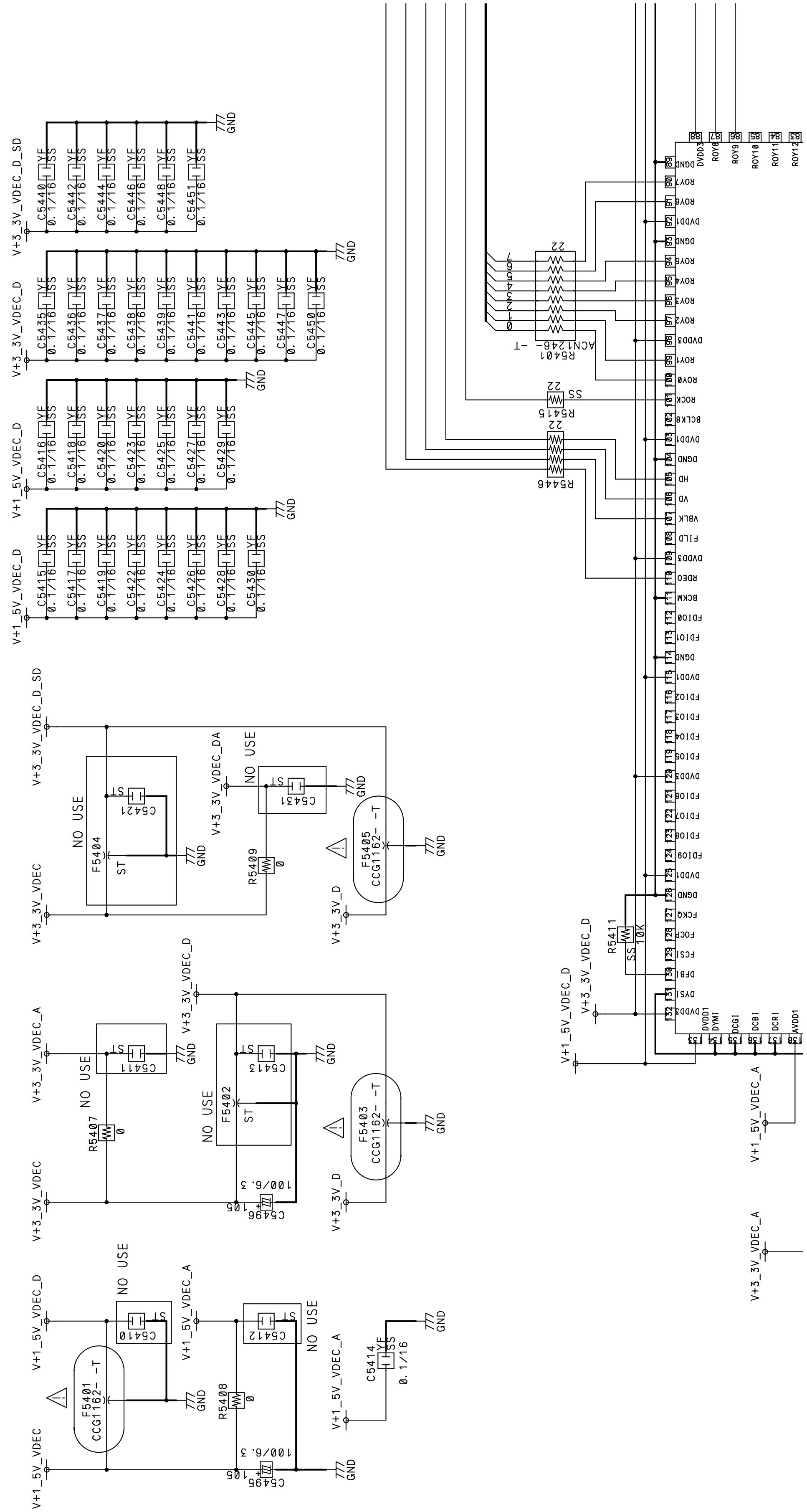
FHD MAIN ASSY (8/16)

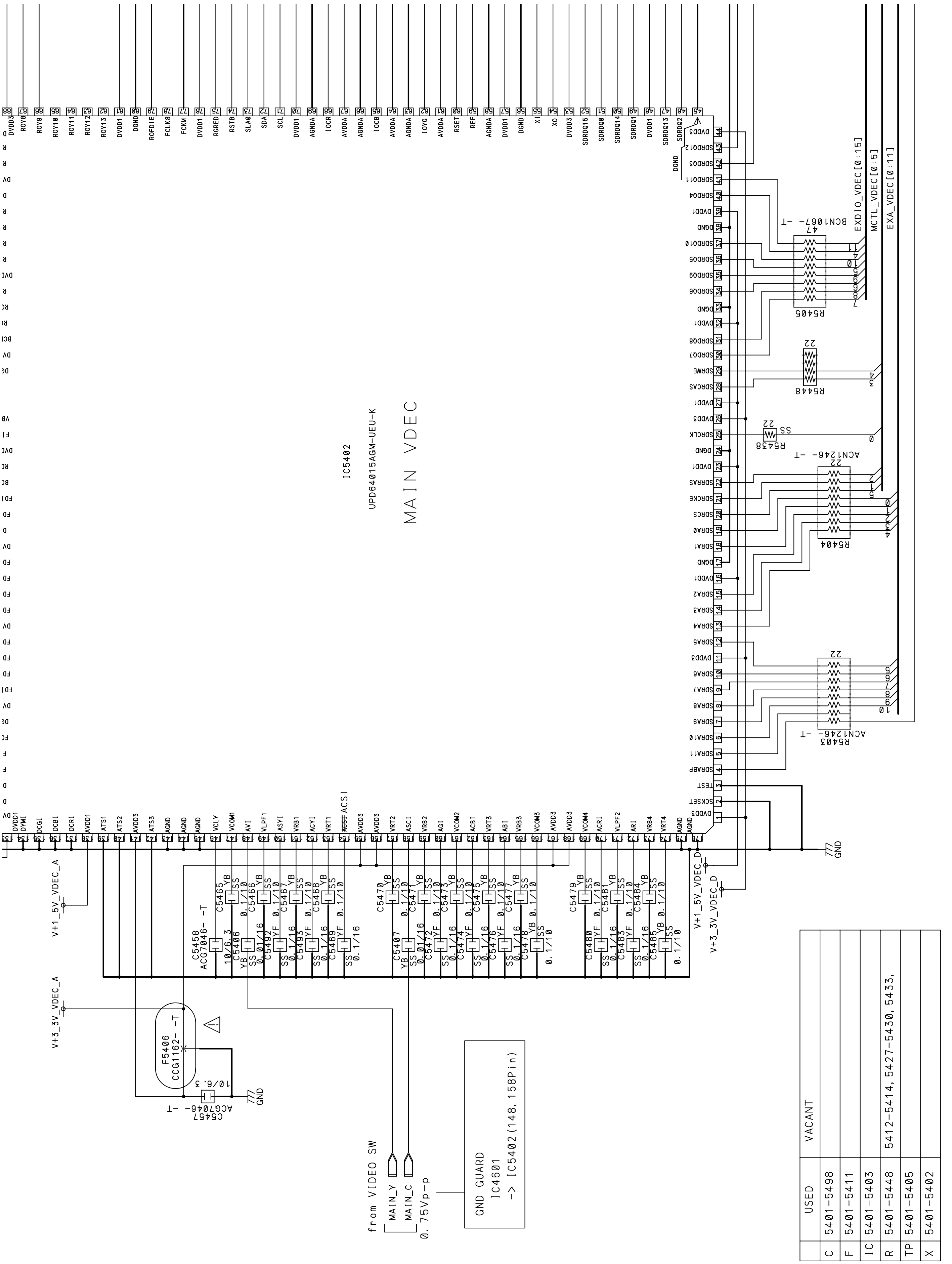
- VDEC BLOCK

NO USE

Large size SCH diagram




V+3_3V_VDEC_D_SD
C5440 C5442 C5444 C5446 C5448 C5451
0.1/16 YF SS
GND
V+3_3V_VDEC_D
C5435 C5436 C5437 C5438 C5439 C5441 C5443 C5445 C5447 C5450
V+1_5V_VDEC_D
C5416 C5418 C5420 C5423 C5425 C5427 C5429
C5415 C5417 C5419 C5422 C5424 C5426 C5428 C5430
V+3_3V_VDEC_D_SD
NO USE
C5421
ST
F5404
V+3_3V_VDEC_DA
C5431
R5409
0
F5405
CCG1162- -T
V+3_3V_VDEC
V+3_3V_D
V+3_3V_VDEC_A
C5411
R5407
V+3_3V_VDEC_D
C5413
F5402
F5403
CCG1162- -T
100/6.3
C5496
105
V+1_5V_VDEC_D
C5410
F5401
CCG1162- -T
V+1_5V_VDEC_A
C5412
R5408
V+1_5V_VDEC_A
C5414
0.1/16
C5495
V+1_5V_VDEC
R5401
ACN1246- -T
22
R5415
SS
R5446
R5411
10K
V+3_3V_VDEC_D
V+1_5V_VDEC_D
V+1_5V_VDEC_A
V+3_3V_VDEC_A
DVDD3 ROY8 ROY9 ROY10 ROY11 ROY12
DGND ROY7 ROY6 DVDD1 DGND ROY5 ROY4 ROY3 ROY2 DVDD3 ROY1 ROY0 ROCK BCLK8 DVDD1 DGND HD VD VBLK FILD DVDD3 RDEO BCKM FDI00 FDI01 DGND DVDD1 FDI02 FDI03 FDI04 FDI05 DVDD3 FDI06 FDI07 FDI08 FDI09 DVDD1 DGND FCKO FCCP FCSI DFBI DYSI DVDD3
DVDD1 DYMI DCGI DCBI DCRI AVDD1

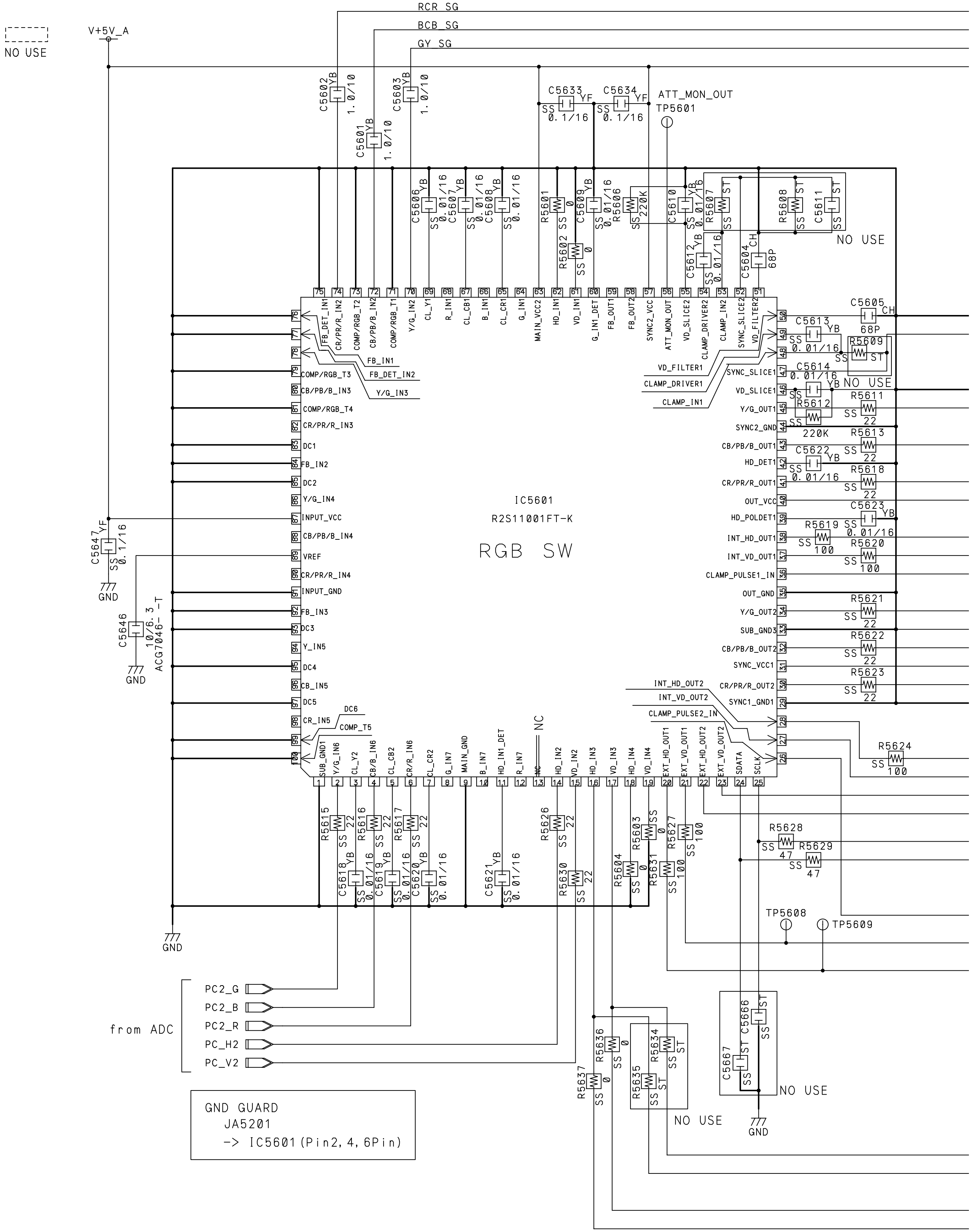

IC5402
UPD64015AGM-UEU-K
MAIN VDEC
BCN1067- -T
R5405
R5448
R5438
ACN1246- -T
R5404
R5403
EXDIO_VDEC[0:15]
MCTL_VDEC[0:5]
EXA_VDEC[0:11]
V+1_5V_VDEC_A
V+3_3V_VDEC_A
V+1_5V_VDEC_D
V+3_3V_VDEC_D
F5406
CCG1162- -T
C5457
ACG7046- -T
10/6.3
C5458
GND
from VIDEO SW
MAIN_Y
MAIN_C
0.75Vp-p
GND GUARD
IC4601
-> IC5402(148,158Pin)

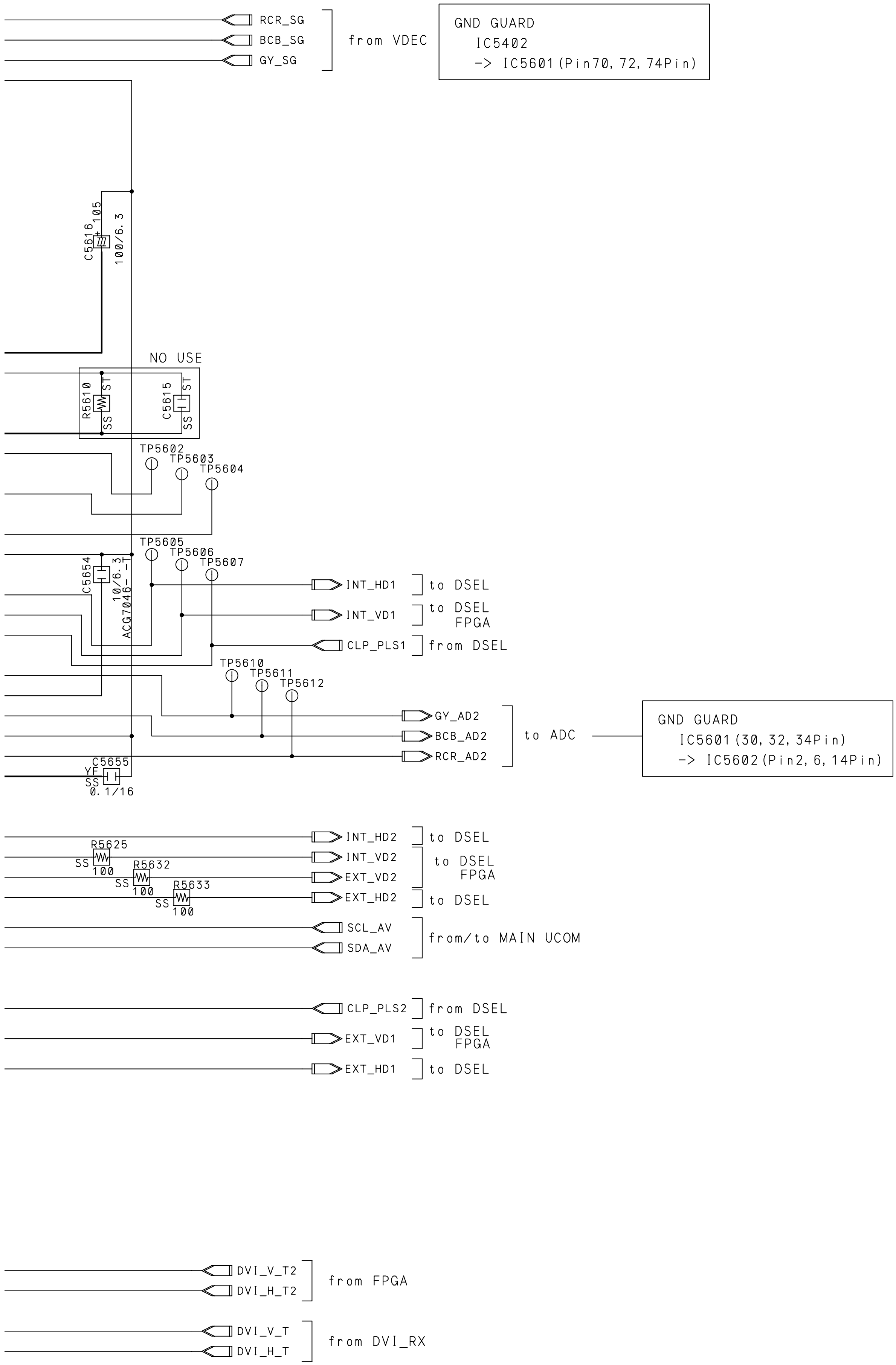
	USED	VACANT
C	5401-5498	
F	5401-5411	
IC	5401-5403	
R	5401-5448	5412-5414, 5427-5430, 5433,
TP	5401-5405	
X	5401-5402	

1.43 FHD MAIN ASSY (9/16)

FHD MAIN ASSY (9/16)

• RGB SW BLOCK


NO USE
V+5V_A
RCR_SG
BCB_SG
GY_SG
C5602 YB 1.0/10
C5603 YB 1.0/10
C5601 YB 1.0/10
C5633 YF SS 0.1/16
C5634 YF SS 0.1/16
ATT_MON_OUT
TP5601
C5606 YB SS 0.01/16
C5607 YB SS 0.01/16
C5608 YB SS 0.01/16
R5601 SS 0
R5602 SS 0
C5609 YB SS 0.01/16
R5606 SS 220K
C5610 YB SS 0.01/16
R5607 ST SS
R5608 ST SS
C5611 ST SS
NO USE
C5612 YB SS 0.01/16
C5604 CH 68P
C5605 CH 68P
C5613 YB SS 0.01/16
R5609 SS ST
NO USE
C5614 YB SS 0.01/16
R5611 SS 22
R5612 SS 220K
R5613 SS 22
C5622 YB SS 0.01/16
R5618 SS 22
C5623 YB SS 0.01/16
R5619 SS 100
R5620 SS 100
R5621 SS 22
R5622 SS 22
R5623 SS 22
R5624 SS 100
IC5601
R2S11001FT-K
RGB SW
FB_DET_IN1
CR/PR/R_IN2
COMP/RGB_T2
CB/PB/B_IN2
COMP/RGB_T1
Y/G_IN2
CL_Y1
R_IN1
CL_CB1
B_IN1
CL_CR1
G_IN1
MAIN_VCC2
HD_IN1
VD_IN1
G_IN1_DET
FB_OUT1
FB_OUT2
SYNC2_VCC
ATT_MON_OUT
VD_SLICE2
CLAMP_DRIVER2
CLAMP_IN2
SYNC_SLICE2
VD_FILTER2
FB_IN1
FB_DET_IN2
Y/G_IN3
COMP/RGB_T3
CB/PB/B_IN3
COMP/RGB_T4
CR/PR/R_IN3
DC1
FB_IN2
DC2
Y/G_IN4
INPUT_VCC
CB/PB/B_IN4
VREF
CR/PR/R_IN4
INPUT_GND
FB_IN3
DC3
Y_IN5
DC4
CB_IN5
DC5
CR_IN5
DC6
COMP_T5
VD_FILTER1
CLAMP_DRIVER1
CLAMP_IN1
SYNC_SLICE1
VD_SLICE1
Y/G_OUT1
SYNC2_GND
CB/PB/B_OUT1
HD_DET1
CR/PR/R_OUT1
OUT_VCC
HD_POLDET1
INT_HD_OUT1
INT_VD_OUT1
CLAMP_PULSE1_IN
OUT_GND
Y/G_OUT2
SUB_GND3
CB/PB/B_OUT2
SYNC_VCC1
CR/PR/R_OUT2
SYNC1_GND1
INT_HD_OUT2
INT_VD_OUT2
CLAMP_PULSE2_IN
SUB_GND1
Y/G_IN6
CL_Y2
CB/B_IN6
CL_CB2
CR/R_IN6
CL_CR2
G_IN7
MAIN_GND
B_IN7
HD_IN1_DET
R_IN7
NC
HD_IN2
VD_IN2
HD_IN3
VD_IN3
HD_IN4
VD_IN4
EXT_HD_OUT1
EXT_VD_OUT1
EXT_HD_OUT2
EXT_VD_OUT2
SDATA
SCLK
C5647 YF SS 0.1/16
GND
C5646 10/6.3 ACG7046- -T
GND
R5615 SS 22
R5616 SS 22
R5617 SS 22
C5618 YB SS 0.01/16
C5619 YB SS 0.01/16
C5620 YB SS 0.01/16
C5621 YB SS 0.01/16
R5626 SS 22
R5630 SS 22
R5603 SS 0
R5604 SS 0
R5627 SS 100
R5631 SS 100
R5628 SS 47
R5629 SS 47
TP5608
TP5609
GND
PC2_G
PC2_B
PC2_R
PC_H2
PC_V2
from ADC
R5636 SS 0
R5637 SS 0
R5634 SS ST
R5635 SS ST
NO USE
C5666 ST SS
C5667 ST SS
NO USE
GND
GND GUARD
JA5201
-> IC5601(Pin2,4,6Pin)


RCR_SG
BCB_SG
GY_SG
from VDEC
C5616
105
100/6.3
NO USE
R5610
ST
SS
C5615
ST
SS
TP5602
TP5603
TP5604
TP5605
TP5606
TP5607
C5654
10/6.3
ACG7046-T
INT_HD1
to DSEL
INT_VD1
to DSEL FPGA
CLP_PLS1
from DSEL
TP5610
TP5611
TP5612
GY_AD2
BCB_AD2
RCR_AD2
to ADC
C5655
YF
SS
0.1/16
INT_HD2
to DSEL
R5625
SS
100
INT_VD2
R5632
SS
100
EXT_VD2
to DSEL FPGA
R5633
SS
100
EXT_HD2
to DSEL
SCL_AV
SDA_AV
from/to MAIN UCOM
CLP_PLS2
from DSEL
EXT_VD1
to DSEL FPGA
EXT_HD1
to DSEL
DVI_V_T2
DVI_H_T2
from FPGA
DVI_V_T
DVI_H_T
from DVI_RX

GND GUARD
IC5402
-> IC5601(Pin70, 72, 74Pin)

GND GUARD
IC5601(30, 32, 34Pin)
-> IC5602(Pin2, 6, 14Pin)

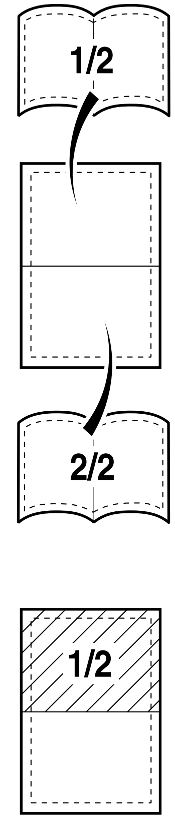
1.44 FHD MAIN ASSY (10/16)

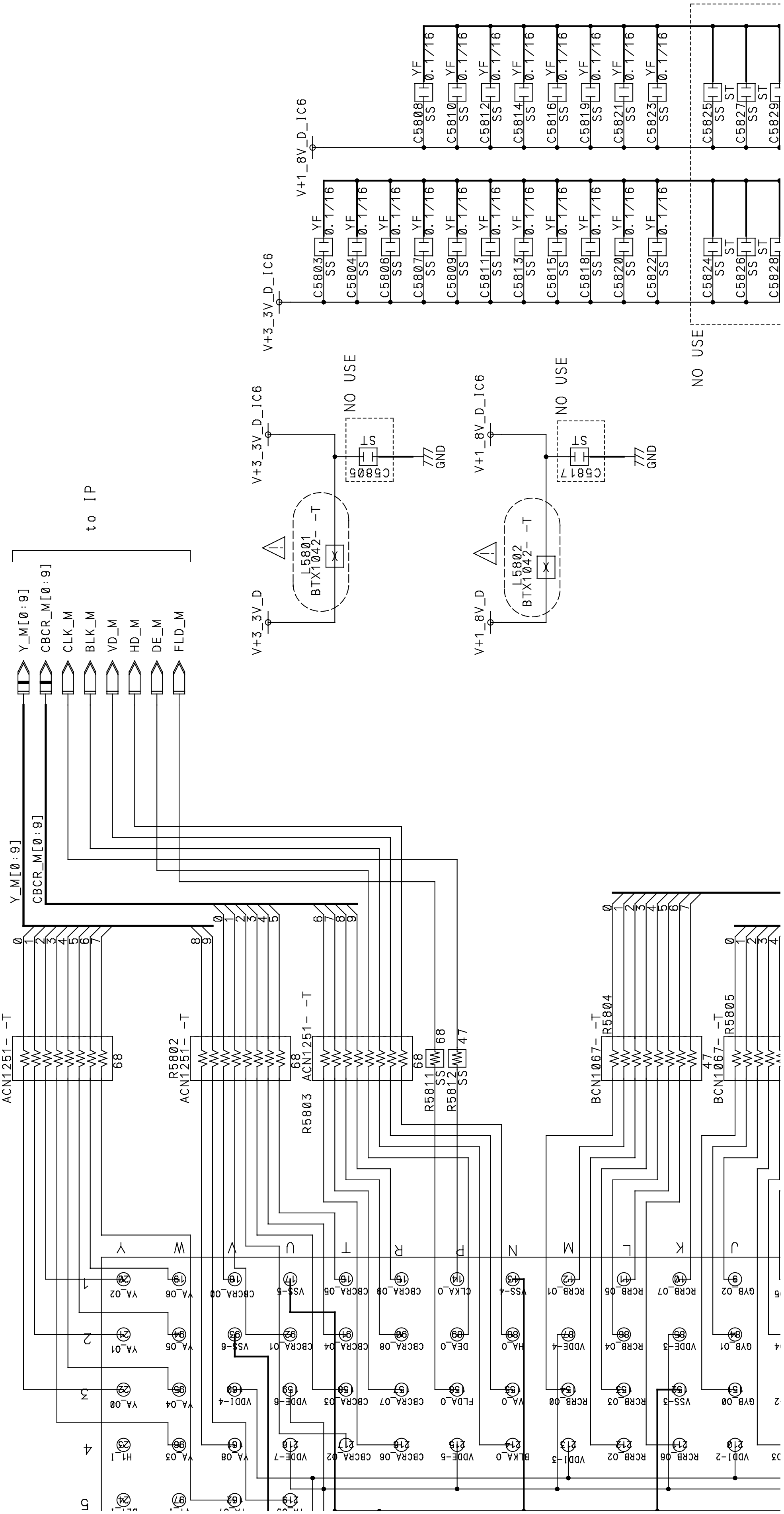
FHD MAIN ASSY (10/16)

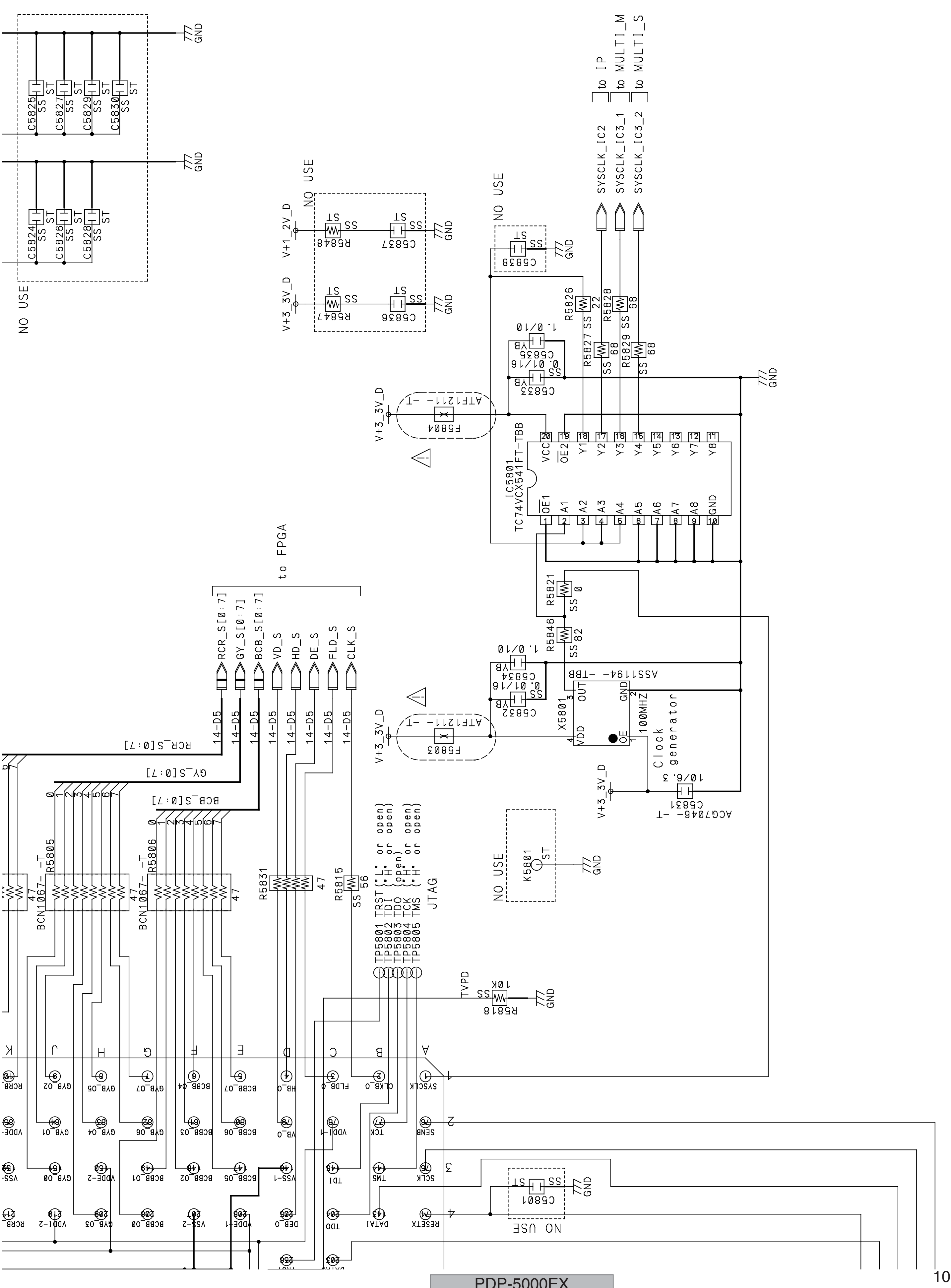
• DSEL BLOCK

NO USE

Large size SCH diagram




V+1_8V_D_IC6
V+3_3V_D_IC6
C5808 C5810 C5812 C5814 C5816 C5819 C5821 C5823 C5825 C5827 C5829
C5803 C5804 C5806 C5807 C5809 C5811 C5813 C5815 C5818 C5820 C5822 C5824 C5826 C5828
SS YF 0.1/16
SS ST
NO USE
C5805
C5817
ST
GND
L5801 BTX1042- -T
L5802 BTX1042- -T
V+3_3V_D
V+1_8V_D
to IP
Y_M[0:9]
CBCR_M[0:9]
CLK_M
BLK_M
VD_M
HD_M
DE_M
FLD_M
R5801 ACN1251- -T 68
R5802 ACN1251- -T 68
R5803 ACN1251- -T 68
R5811 SS 68
R5812 SS 47
R5804 BCN1067- -T 47
R5805 BCN1067- -T 47
Y W V U T R P N M L K J
1 2 3 4 5
YA_02 YA_06 CBCRA_00 VSS-5 CBCRA_05 CBCRA_09 CLKA_0 VSS-4 RCRB_01 RCRB_05 RCRB_07 GYB_02
YA_01 YA_05 VSS-6 CBCRA_01 CBCRA_04 CBCRA_08 DEA_0 HA_0 VDDE-4 RCRB_04 VDDE-3 GYB_01
YA_00 YA_04 VDDI-4 VDDE-6 CBCRA_03 CBCRA_07 FLDA_0 VA_0 RCRB_00 RCRB_03 VSS-3 GYB_00
H1_1 YA_03 YA_08 VDDE-7 CBCRA_02 CBCRA_06 VDDE-5 BLKA_0 VDDI-3 RCRB_02 RCRB_06 VDDI-2

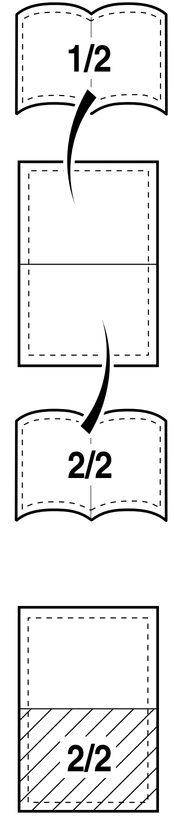

NO USE
C5825 SS ST
C5827 SS ST
C5829 SS ST
C5830 SS ST
C5824 SS ST
C5826 SS ST
C5828 SS ST
GND
V+1_2V_D
V+3_3V_D
R5848 SS ST
R5847 SS ST
C5837 SS ST
C5836 SS ST
C5838 SS ST
SYSCLK_IC2
SYSCLK_IC3_1
SYSCLK_IC3_2
to IP
to MULTI_M
to MULTI_S
R5826 SS 22
R5828 SS 68
R5827 SS 68
R5829 SS 68
C5835 YB 0.01/16
1.0/10
C5833 YB SS
F5804
ATF1211-T
IC5801
TC74VCX541FT-TBB
VCC
OE2
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
OE1
A1
A2
A3
A4
A5
A6
A7
A8
GND
R5821 SS 0
R5846 SS 82
C5834 YB 0.01/16
C5832 YB SS
X5801
ASS1194-TBB
OUT
VDD
OE
100MHZ
Clock generator
F5803
ATF1211-T
C5831
10/6.3
ACG7046-T
to FPGA
RCR_S[0:7]
GY_S[0:7]
BCB_S[0:7]
VD_S
HD_S
DE_S
FLD_S
CLK_S
14-D5
R5805
R5806
BCN1067-T
47
R5831
47
R5815 SS 56
TP5801 TRST ("L" or open)
TP5802 TDI ("H" or open)
TP5803 TDO (open)
TP5804 TCK ("H" or open)
TP5805 TMS ("H" or open)
JTAG
NO USE
K5801 ST
TVPD
R5818 SS 10K
K J H G F E D C B A
1 2 3 4
SYSCLK
CLKB_O
FLDB_O
HB_O
BCBB_07
BCBB_04
GVB_07
GVB_05
GVB_02
RCRB
SENB
TCK
VDDI-1
VB_O
BCBB_06
BCBB_03
GVB_06
GVB_04
GVB_01
VDDE
SCLK
TMS
TDI
VSS-1
BCBB_05
BCBB_02
BCBB_01
VDDE-2
GVB_00
VSS
RESETX
DATA1
TDO
DEB_O
VDDE-1
VSS-2
BCBB_00
GVB_03
VDDI-2
RCRB
C5801 SS ST
NO USE

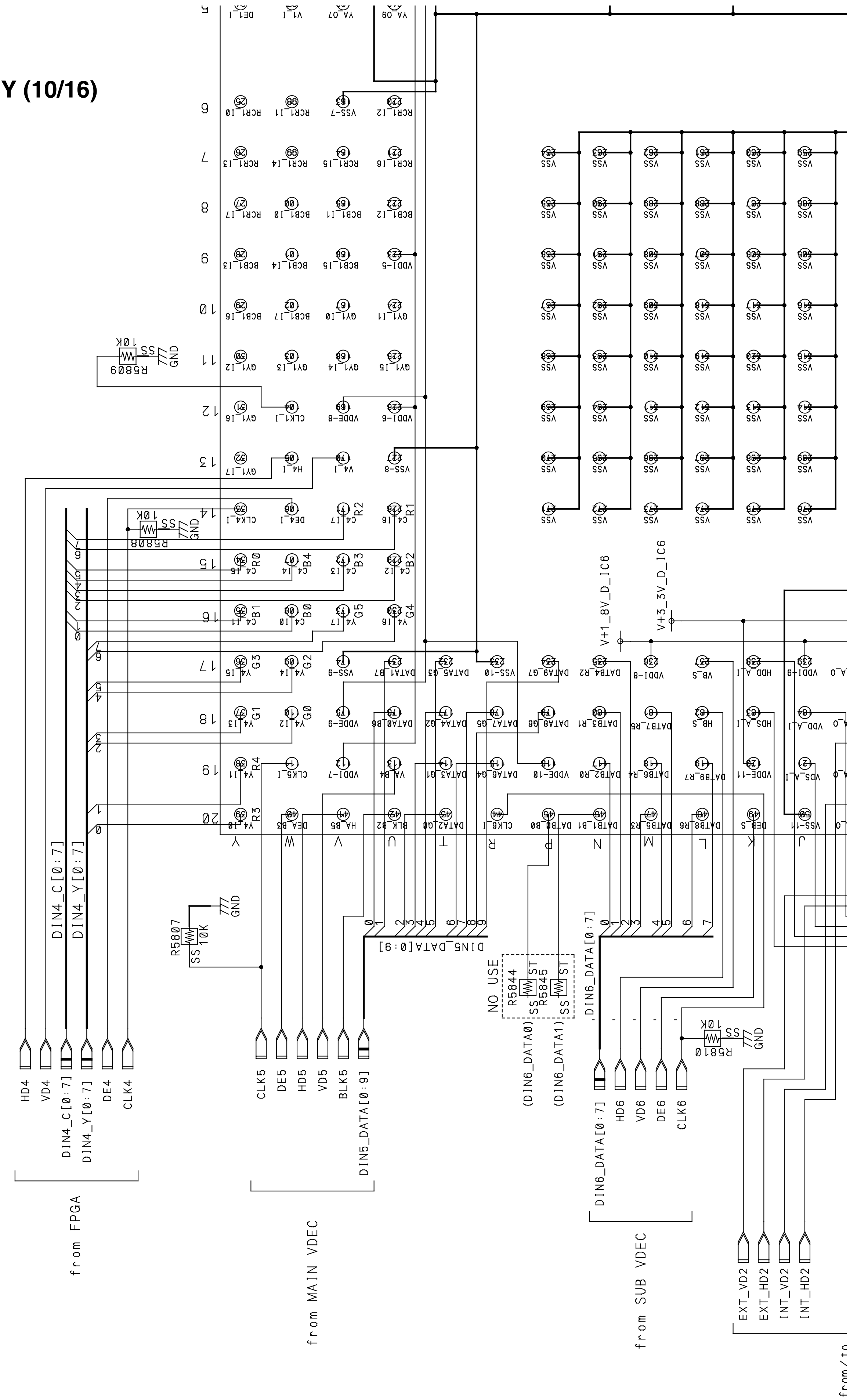
FHD MAIN ASSY (10/16)

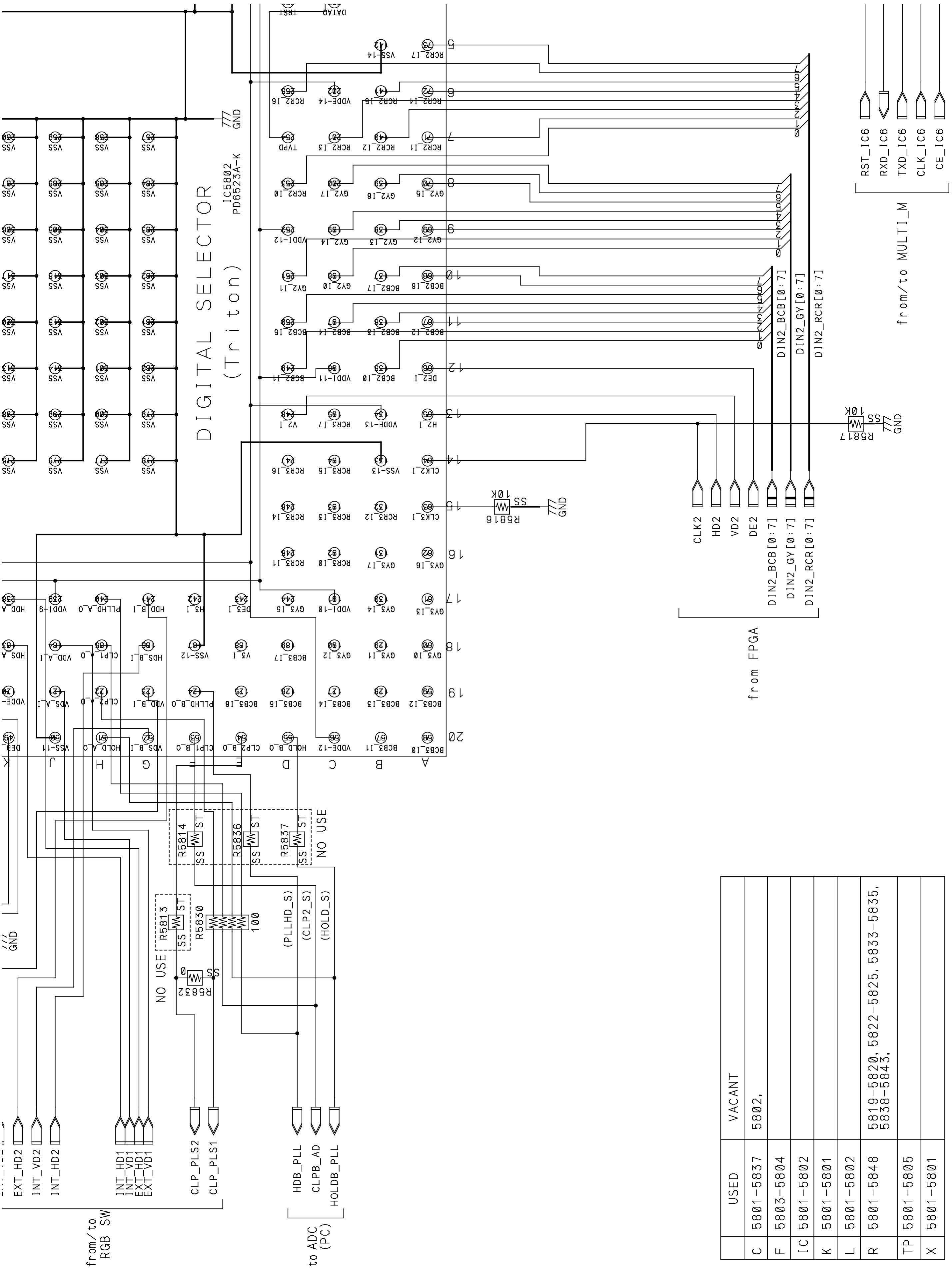
- DSEL BLOCK

NO USE

Large size SCH diagram




R5809
10K
SS
GND
R5808
10K
SS
GND
R5807
10K
SS
GND
R5810
10K
SS
GND
NO USE
R5844
R5845
SS
ST
V+1_8V_D_IC6
V+3_3V_D_IC6
DIN4_C[0:7]
DIN4_Y[0:7]
DIN5_DATA[0:9]
DIN6_DATA[0:7]
HD4
VD4
DIN4_C[0:7]
DIN4_Y[0:7]
DE4
CLK4
from FPGA
CLK5
DE5
HD5
VD5
BLK5
DIN5_DATA[0:9]
from MAIN VDEC
(DIN6_DATA0)
(DIN6_DATA1)
DIN6_DATA[0:7]
HD6
VD6
DE6
CLK6
from SUB VDEC
EXT_VD2
EXT_HD2
INT_VD2
INT_HD2
from/to


DIGITAL SELECTOR
(Triton)
IC5802
PD6523A-K
GND
R5817
10K
SS
R5816
10K
SS
GND
CLK2
HD2
VD2
DE2
DIN2_BCB[0:7]
DIN2_GY[0:7]
DIN2_RCR[0:7]
from FPGA
RST_IC6
RXD_IC6
TXD_IC6
CLK_IC6
CE_IC6
from/to MULTI_M
R5814
R5836
R5837
ST
SS
NO USE
R5813
R5830
100
(PLLHD_S)
(CLP2_S)
(HOLD_S)
NO USE
R5832
0
GND
EXT_HD2
INT_VD2
INT_HD2
INT_HD1
INT_VD1
EXT_HD1
EXT_VD1
CLP_PLS2
CLP_PLS1
from/to RGB SW
HDB_PLL
CLPB_AD
HOLDB_PLL
to ADC (PC)
A B C D E F G H J K
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

	USED	VACANT
C	5801-5837	5802,
F	5803-5804	
IC	5801-5802	
K	5801-5801	
L	5801-5802	
R	5801-5848	5819-5820, 5822-5825, 5833-5835, 5838-5843,
TP	5801-5805	
X	5801-5801	

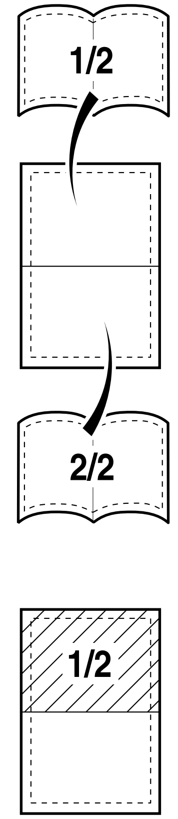
1.45 FHD MAIN ASSY (11/16)

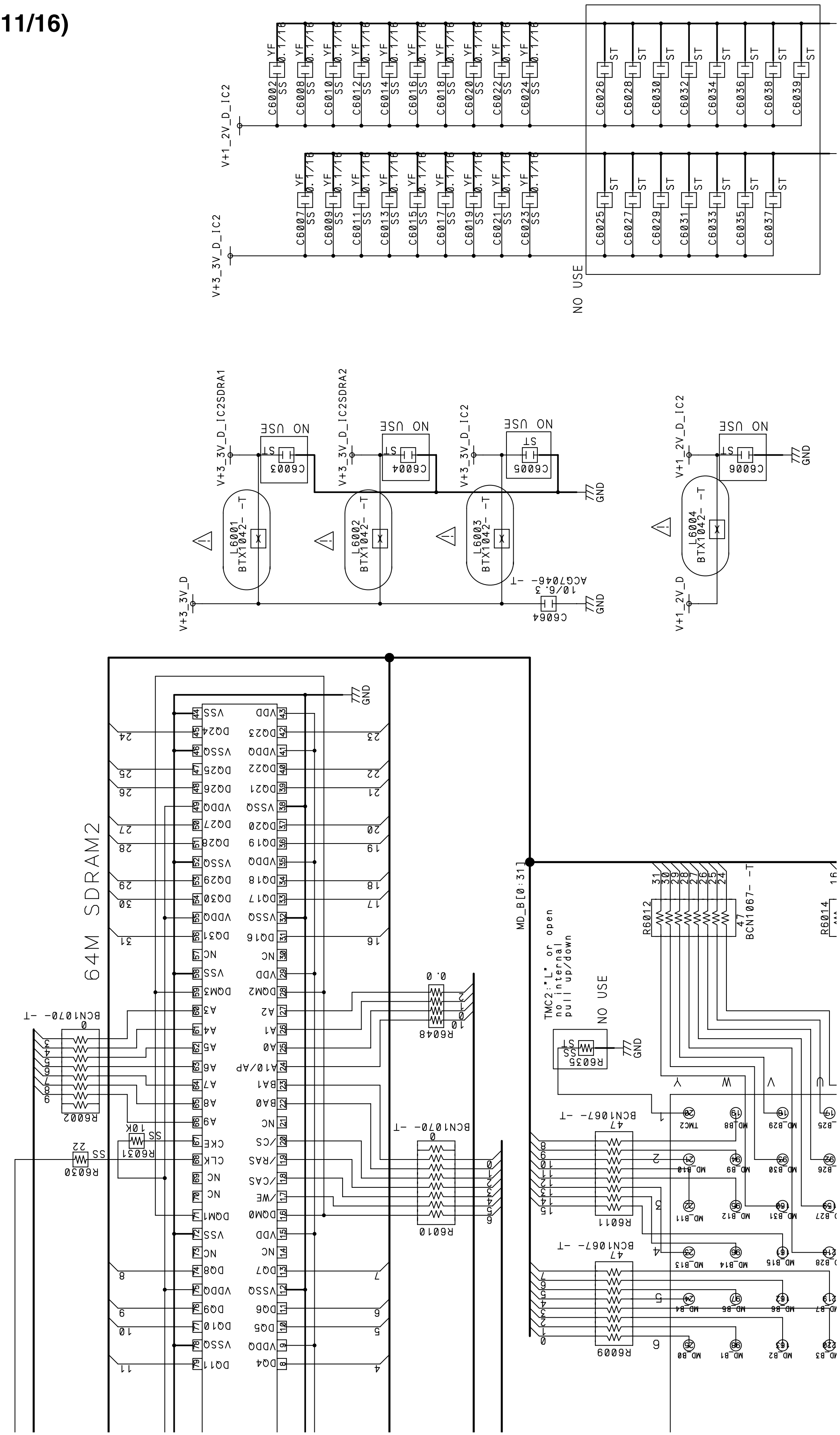
FHD MAIN ASSY (11/16)

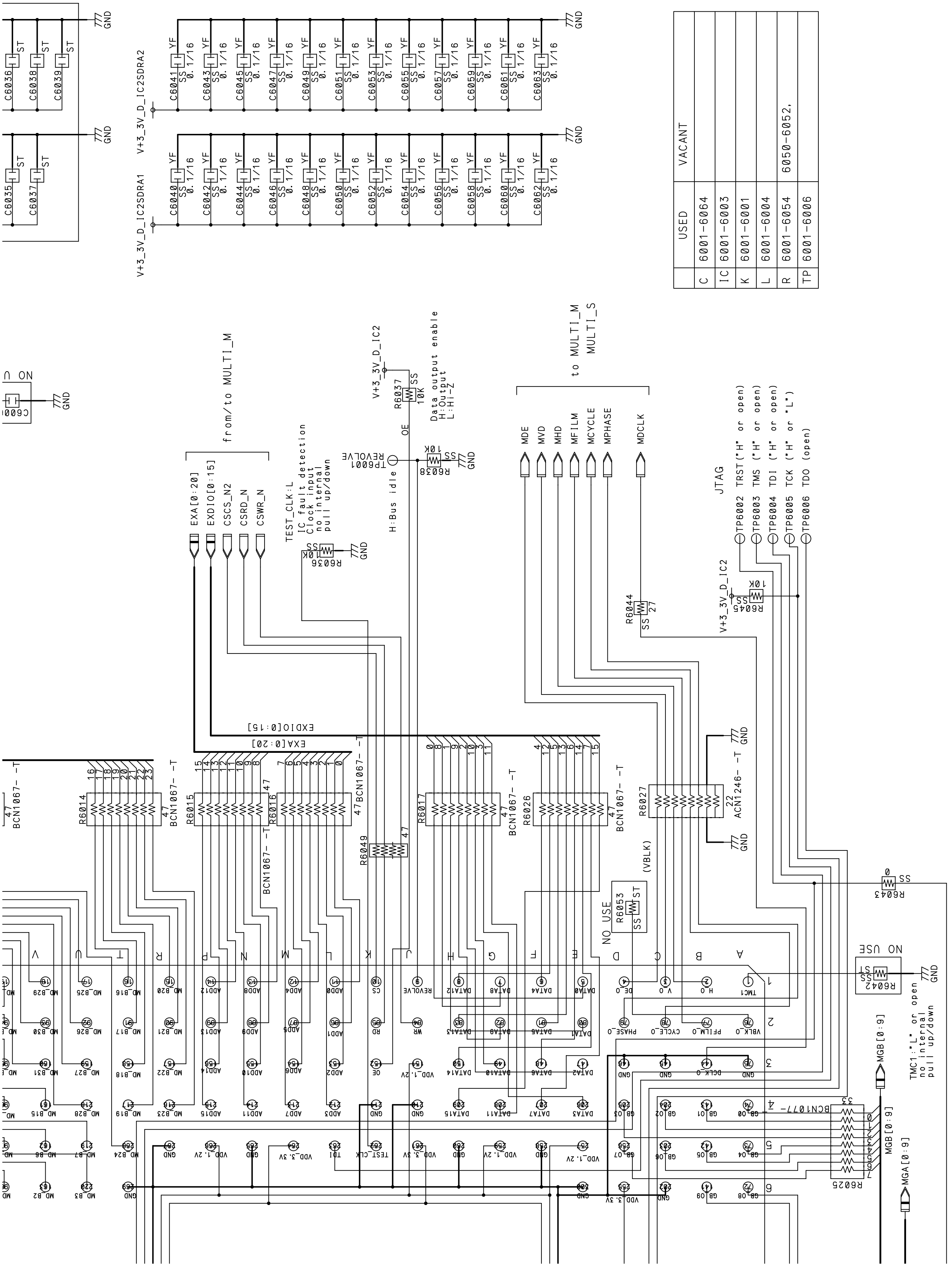
- IP BLOCK

NO USE

Large size SCH diagram




V+1_2V_D_IC2
V+3_3V_D_IC2
C6002 C6008 C6010 C6012 C6014 C6016 C6018 C6020 C6022 C6024
C6007 C6009 C6011 C6013 C6015 C6017 C6019 C6021 C6023
YF 0.1/16 SS
C6026 C6028 C6030 C6032 C6034 C6036 C6038 C6039
C6025 C6027 C6029 C6031 C6033 C6035 C6037
ST
NO USE
V+3_3V_D_IC2SDRA1
V+3_3V_D_IC2SDRA2
V+3_3V_D_IC2
V+1_2V_D_IC2
C6003 C6004 C6005 C6006
L6001 BTX1042- -T
L6002 BTX1042- -T
L6003 BTX1042- -T
L6004 BTX1042- -T
V+3_3V_D
V+1_2V_D
C6064 10/6.3 ACG7046- -T
GND
64M SDRAM2
MD_B[0:31]
R6002 BCN1070- -T 0
R6048 0.0
R6010 BCN1070- -T 0
R6030 22 SS
R6031 10K SS
R6012 47 BCN1067- -T
R6014
R6035 SS ST
TMC2:"L" or open no internal pull up/down
R6011 BCN1067- -T 47
R6009 BCN1067- -T 47
VSS DQ24 VSSQ DQ25 DQ26 VDDQ DQ27 DQ28 VSSQ DQ29 DQ30 VDDQ DQ31 NC VSS DQM3 A3 A4 A5 A6 A7 A8 A9 CKE CLK NC NC DQM1 VSS NC DQ8 VDDQ DQ9 DQ10 VSSQ DQ11
VDD DQ23 VDDQ DQ22 DQ21 VSSQ DQ20 DQ19 VDDQ DQ18 DQ17 VSSQ DQ16 NC VDD DQM2 A2 A1 A0 A10/AP BA1 BA0 NC /CS /RAS /CAS /WE DQM0 VDD NC DQ7 VSSQ DQ6 DQ5 VDDQ DQ4
TMC2 MD_B8 MD_B29 B25
MD_B10 MD_B9 MD_B30 B26
MD_B11 MD_B12 MD_B31 MD_B27
MD_B13 MD_B14 MD_B15 MD_B28
MD_B4 MD_B5 MD_B6 MD_B7
MD_B0 MD_B1 MD_B2 MD_B3
Y W V U

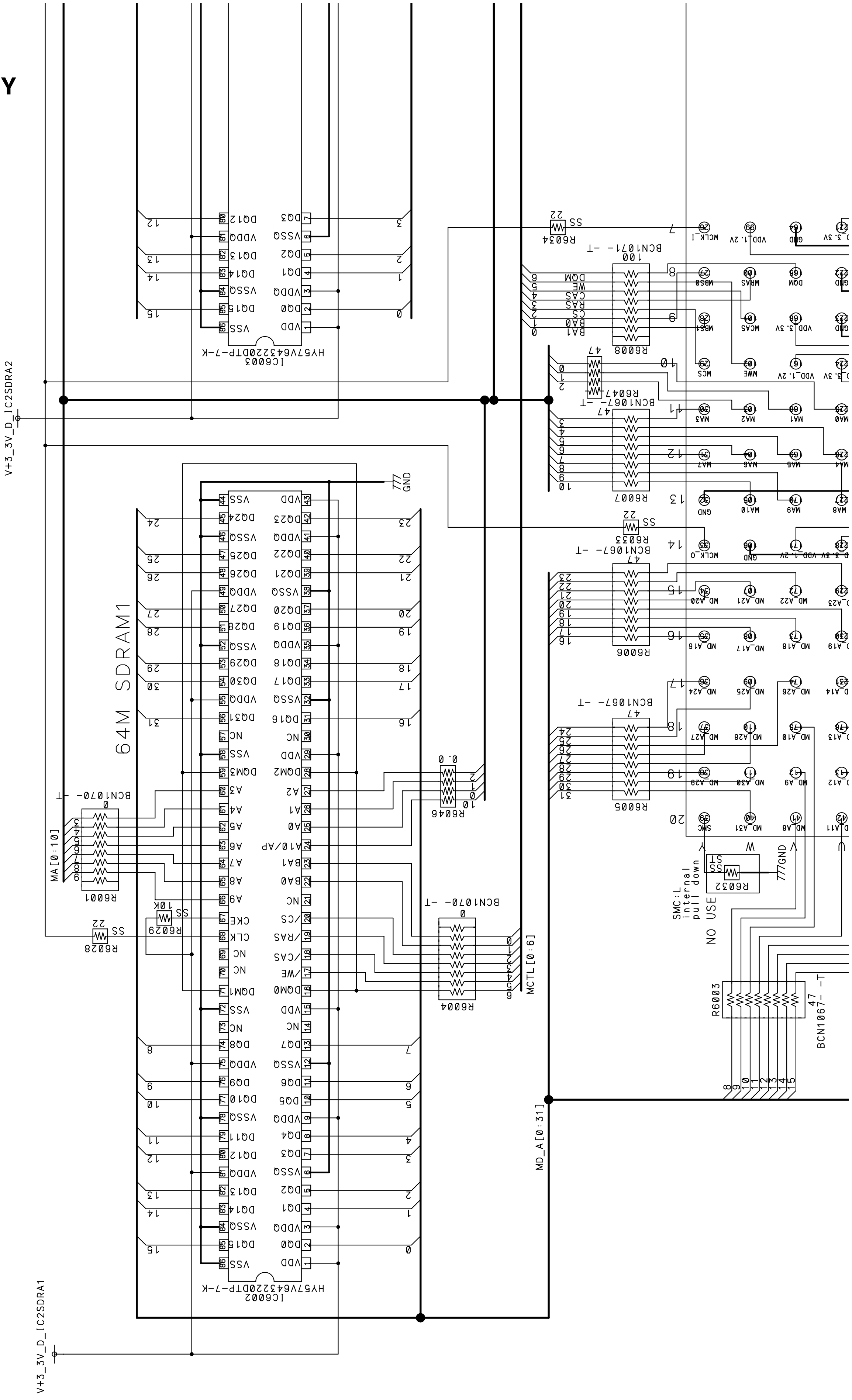

C6035 C6036 C6037 C6038 C6039 ST
GND
V+3_3V_D_IC2SDRA1
V+3_3V_D_IC2SDRA2
C6040 C6041 C6042 C6043 C6044 C6045 C6046 C6047 C6048 C6049 C6050 C6051 C6052 C6053 C6054 C6055 C6056 C6057 C6058 C6059 C6060 C6061 C6062 C6063
YF SS 0.1/16
NO U
from/to MULTI_M
EXA[0:20]
EXDIO[0:15]
CSCS_N2
CSRD_N
CSWR_N
TEST_CLK:L
IC fault detection
Clock input
no internal
pull up/down
R6036 10K SS
V+3_3V_D_IC2
R6037 SS 10K
Data output enable
H:Output
L:Hi-Z
OE
TP6001 REVOLVE
R6038 10K SS
H:Bus idle
to MULTI_M
MULTI_S
MDE MVD MHD MFILM MCYCLE MPHASE MDCLK
JTAG
TP6002 TRST ("H" or open)
TP6003 TMS ("H" or open)
TP6004 TDI ("H" or open)
TP6005 TCK ("H" or "L")
TP6006 TDO (open)
R6044 SS 27
R6045 SS 10K
R6014 R6015 R6016 R6017 R6026 R6027 R6049
47 BCN1067- -T
22 ACN1246- -T
(VBLK)
NO USE
R6053 SS ST
R6043 SS 0
R6042 SS ST
TMC1:"L" or open
no internal
pull up/down
MGB[0:9]
MGA[0:9]
R6025 33 BCN1077- -T
TMC1 H_O V_O DE_O REVOLVE CS
ADD0 ADD4 ADD8 ADD12
DATA0 DATA4 DATA8 DATA12
VBLK_O PFILM_O CYCLE_O PHASE_O
DCLK_O GND OE RD WR VDD_1.2V VDD_3.3V
TEST_CLK TDI
GB_00 GB_01 GB_02 GB_03 GB_04 GB_05 GB_06 GB_07 GB_08 GB_09
MD_B2 MD_B3 MD_B6 MD_B7 MD_B15 MD_B16 MD_B17 MD_B18 MD_B19 MD_B20 MD_B21 MD_B22 MD_B23 MD_B24 MD_B25 MD_B26 MD_B27 MD_B28 MD_B29 MD_B30 MD_B31
A B C D E F G H J K L M N P R T U V
1 2 3 4 5 6

	USED	VACANT
C	6001-6064	
IC	6001-6003	
K	6001-6001	
L	6001-6004	
R	6001-6054	6050-6052,
TP	6001-6006	

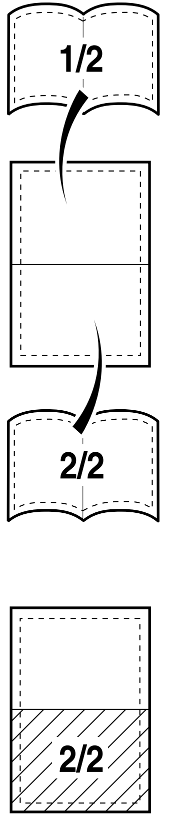
FHD MAIN ASSY
(11/16)

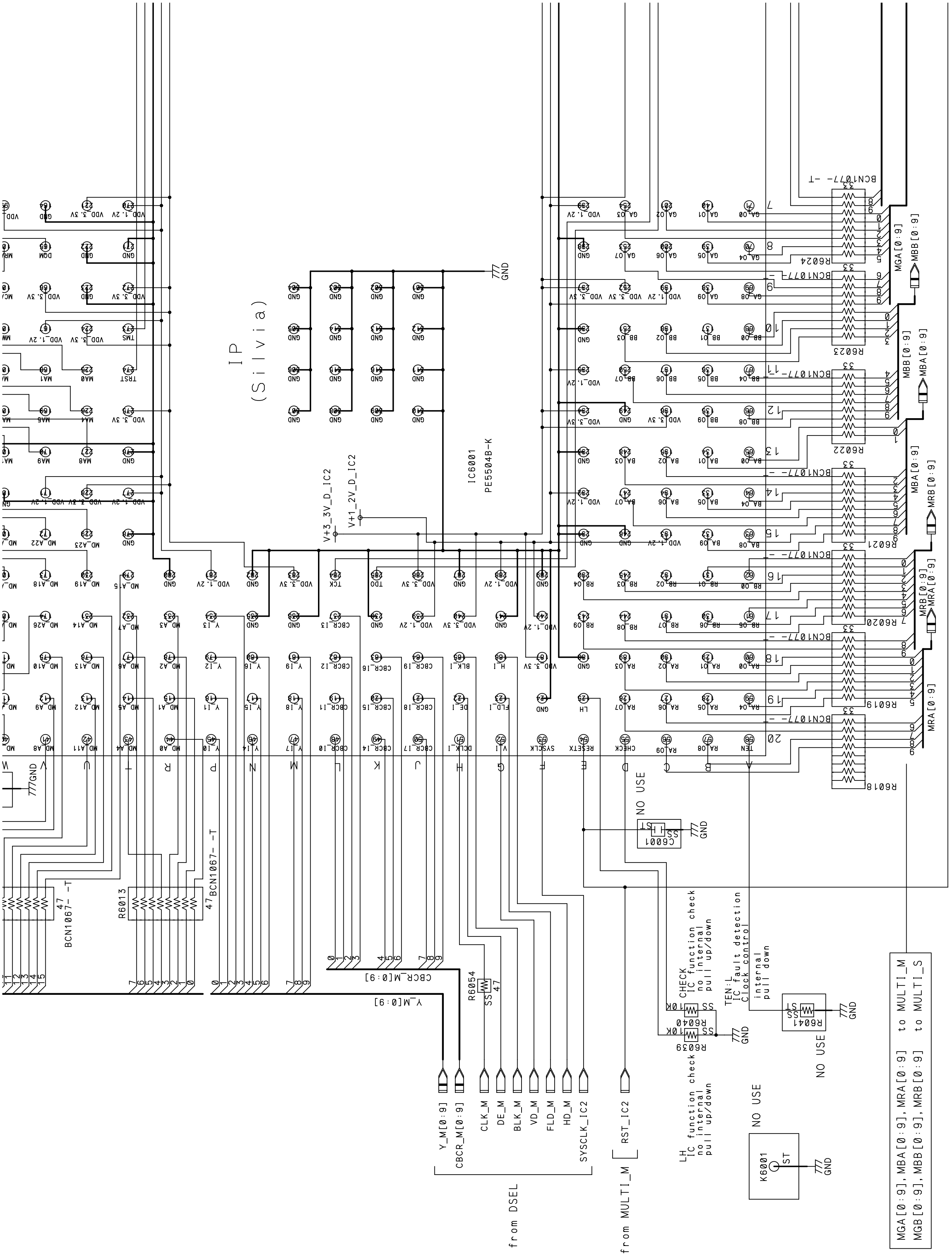
- IP BLOCK

NO USE


IC6003
HY57V643220DTP-7-K
IC6002
HY57V643220DTP-7-K
64M SDRAM1
V+3_3V_D_IC2SDRA2
V+3_3V_D_IC2SDRA1
MA[0:10]
MCTL[0:6]
MD_A[0:31]
R6001
BCN1070- -T
R6004
R6046
R6028
R6029
10K
R6034
R6008
BCN1071- -T
100
R6047
BCN1067- -T
47
R6007
R6033
R6006
R6005
R6003
R6032
SS
GND
SMC:L
internal
pull down
NO USE
VDD
VSS
VDDQ
VSSQ
DQM0
DQM1
DQM2
DQM3
CKE
CLK
/CS
/RAS
/CAS
/WE
BA0
BA1
A10/AP
NC

Large size SCH diagram



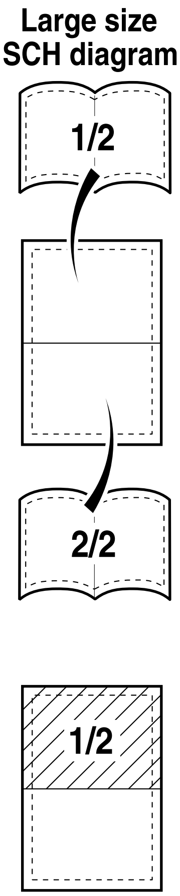

IP
(Silvia)
IC6001
PE5504B-K
V+3_3V_D_IC2
V+1_2V_D_IC2
GND
BCN1077- -T
R6024
R6023
R6022
R6021
R6020
R6019
R6018
33
MGA[0:9]
MBB[0:9]
MBA[0:9]
MRB[0:9]
MRA[0:9]
R6013
BCN1067- -T
47
Y_M[0:9]
CBCR_M[0:9]
R6054
SS
C6001
ST
SS
NO USE
CHECK
IC function check
no internal
pull up/down
TEN:L
IC fault detection
Clock control
internal
pull down
10k
R6040
R6039
R6041
LH
IC function check
no internal
pull up/down
K6001
Y_M[0:9]
CBCR_M[0:9]
CLK_M
DE_M
BLK_M
VD_M
FLD_M
HD_M
SYSCLK_IC2
RST_IC2
from DSEL
from MULTI_M
MGA[0:9],MBA[0:9],MRA[0:9] to MULTI_M
MGB[0:9],MBB[0:9],MRB[0:9] to MULTI_S

1.46 FHD MAIN ASSY (12/16)

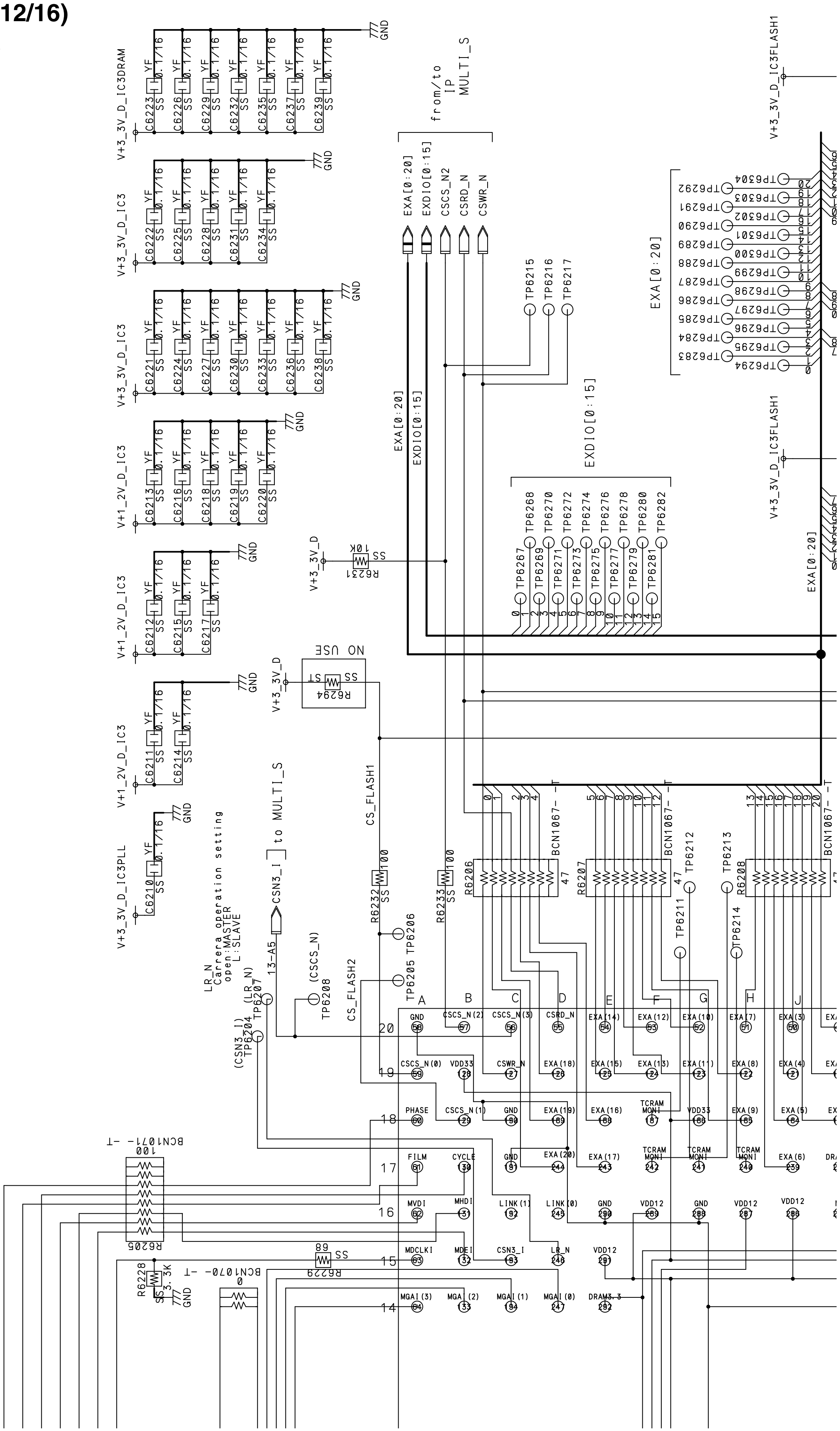
FHD MAIN ASSY (12/16)

- MULTI_M BLOCK

NO USE

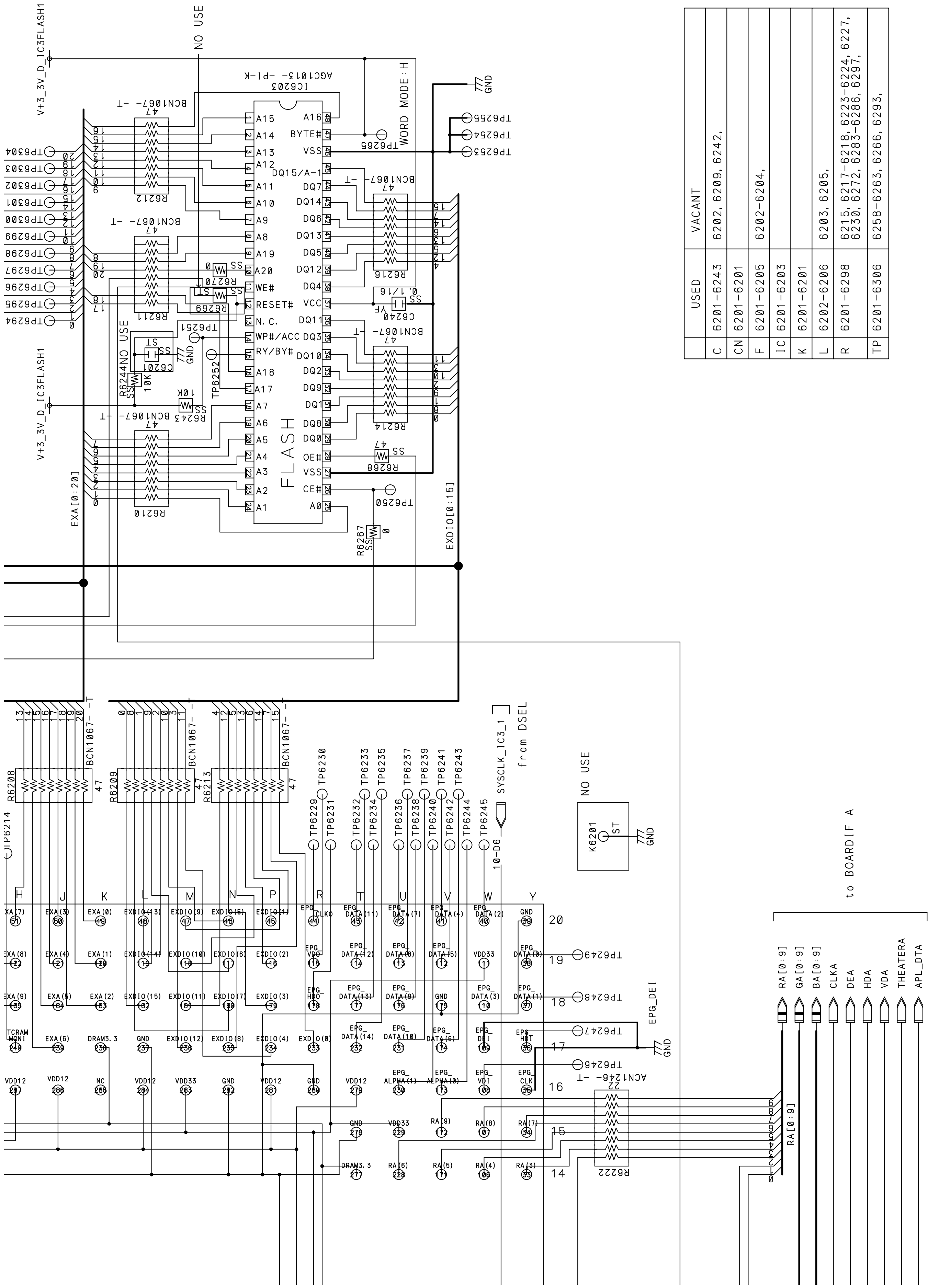


Large size
SCH diagram
1/2
2/2
1/2



V+3_3V_D_IC3DRAM
C6223 C6226 C6229 C6232 C6235 C6237 C6239
YF 0.1/16 SS
GND
V+3_3V_D_IC3
C6222 C6225 C6228 C6231 C6234
C6221 C6224 C6227 C6230 C6233 C6236 C6238
V+1_2V_D_IC3
C6213 C6216 C6218 C6219 C6220
C6212 C6215 C6217
C6211 C6214
V+3_3V_D_IC3PLL
C6210
from/to
IP
MULTI_S
EXA[0:20]
EXDIO[0:15]
CSCS_N2
CSRD_N
CSWR_N
TP6215
TP6216
TP6217
V+3_3V_D
R6231 10K SS
NO USE
R6294 SS ST
V+3_3V_D_IC3FLASH1
TP6283 TP6284 TP6285 TP6286 TP6287 TP6288 TP6289 TP6290 TP6291 TP6292
TP6294 TP6295 TP6296 TP6297 TP6298 TP6299 TP6300 TP6301 TP6302 TP6303 TP6304
TP6267 TP6268 TP6269 TP6270 TP6271 TP6272 TP6273 TP6274 TP6275 TP6276 TP6277 TP6278 TP6279 TP6280 TP6281 TP6282
BCN1067- -T
R6206 47
R6207 47
R6208 47
TP6211 TP6212 TP6213 TP6214
CS_FLASH1
R6232 100 SS
R6233 100 SS
TP6205 TP6206
CS_FLASH2
Carrera operation setting
open:MASTER
L:SLAVE
LR_N
CSN3_I
13-A5
to MULTI_S
(CSCS_N)
TP6208
(LR_N)
TP6207
(CSN3_I)
TP6204
BCN1071- -T 100
R6205
R6228 3.3K SS
BCN1070- -T 0
R6229 68 SS
A B C D E F G H J
20 GND CSCS_N(2) CSCS_N(3) CSRD_N EXA(14) EXA(12) EXA(10) EXA(7) EXA(3)
19 CSCS_N(0) VDD33 CSWR_N EXA(18) EXA(15) EXA(13) EXA(11) EXA(8) EXA(4)
18 PHASE CSCS_N(1) GND EXA(19) EXA(16) TCRAM MONI VDD33 EXA(9) EXA(5)
17 FILM CYCLE GND EXA(20) EXA(17) TCRAM MONI TCRAM MONI TCRAM MONI EXA(6)
16 MVDI MHDI LINK(1) LINK(0) GND VDD12 GND VDD12 VDD12
15 MDCLKI MDEI CSN3_I LR_N VDD12
14 MGAI(3) MGAI(2) MGAI(1) MGAI(0) DRAM3.3

	USED	VACANT
C	6201-6243	6202, 6209, 6242,
CN	6201-6201	
F	6201-6205	6202-6204,
IC	6201-6203	
K	6201-6201	
L	6202-6206	6203, 6205,
R	6201-6298	6215, 6217-6218, 6223-6224, 6227, 6230, 6272, 6283-6286, 6297,
TP	6201-6306	6258-6263, 6266, 6293,

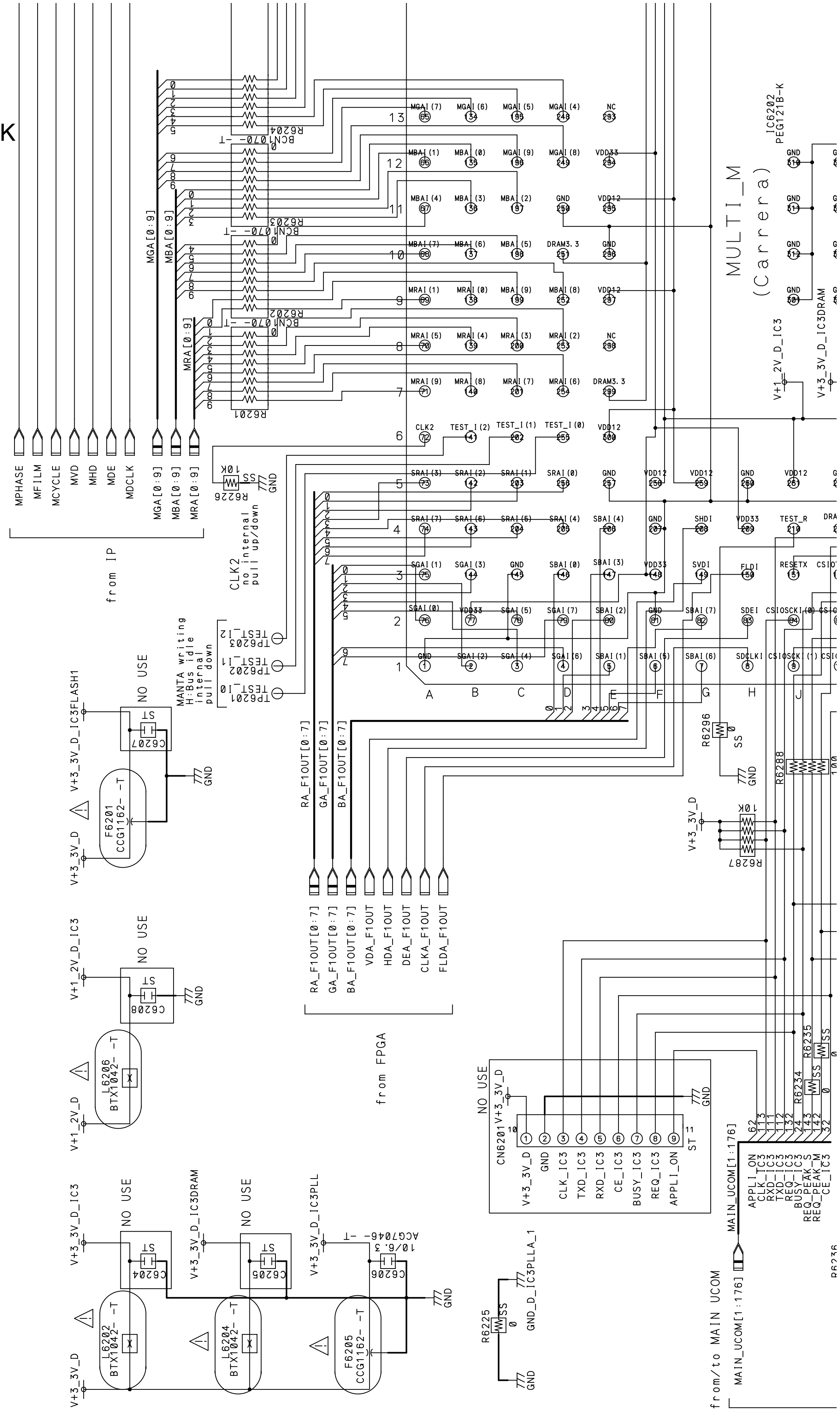


V+3_3V_D_IC3FLASH1
NO USE
IC6203
AGC1013- -PI-K
FLASH
WORD MODE:H
A15
A14
A13
A12
A11
A10
A9
A8
A19
A20
WE#
RESET#
N.C.
WP#/ACC
RY/BY#
A18
A17
A7
A6
A5
A4
A3
A2
A1
A16
BYTE#
VSS
DQ15/A-1
DQ7
DQ14
DQ6
DQ13
DQ5
DQ12
DQ4
VCC
DQ11
DQ3
DQ10
DQ2
DQ9
DQ1
DQ8
DQ0
OE#
CE#
A0
R6212
R6211
R6210
R6216
R6214
BCN1067- -T
47
R6269
R6270
R6243
R6244
10K
C6201
C6240
0.1/16
YF
R6268
R6267
TP6250
TP6251
TP6252
TP6253
TP6254
TP6255
TP6265
TP6294
TP6295
TP6296
TP6297
TP6298
TP6299
TP6300
TP6301
TP6302
TP6303
TP6304
GND
EXA[0:20]
EXDIO[0:15]
R6208
R6209
R6213
TP6214
TP6229
TP6230
TP6231
TP6232
TP6233
TP6234
TP6235
TP6236
TP6237
TP6238
TP6239
TP6240
TP6241
TP6242
TP6243
TP6244
TP6245
SYSCLK_IC3_1
from DSEL
10-D6
K6201
ST
TP6246
TP6247
TP6248
TP6249
EPG_DEI
ACN1246- -T
22
R6222
RA[0:9]
to BOARDIF A
RA[0:9]
GA[0:9]
BA[0:9]
CLKA
DEA
HDA
VDA
THEATERA
APL_DTA
H
J
K
L
M
N
P
R
T
U
V
W
Y
20
19
18
17
16
15
14
EXA(7)
EXA(3)
EXA(0)
EXDIO(13)
EXDIO(9)
EXDIO(5)
EXDIO(1)
EPG_CLKO
EPG_DATA(11)
EPG_DATA(7)
EPG_DATA(4)
EPG_DATA(2)
EXA(8)
EXA(4)
EXA(1)
EXDIO(14)
EXDIO(10)
EXDIO(6)
EXDIO(2)
EPG_VDO
EPG_DATA(12)
EPG_DATA(8)
EPG_DATA(5)
VDD33
EPG_DATA(0)
EXA(9)
EXA(5)
EXA(2)
EXDIO(15)
EXDIO(11)
EXDIO(7)
EXDIO(3)
EPG_HDO
EPG_DATA(13)
EPG_DATA(9)
EPG_DATA(3)
EPG_DATA(1)
TCRAM MONI
EXA(6)
DRAM3.3
EXDIO(12)
EXDIO(8)
EXDIO(4)
EXDIO(0)
EPG_DATA(14)
EPG_DATA(10)
EPG_DATA(6)
EPG_DEI
EPG_HDT
VDD12
NC
VDD33
EPG_ALPHA(1)
EPG_ALPHA(0)
EPG_VDI
EPG_CLK
VDD33
RA(9)
RA(8)
RA(7)
DRAM3.3
RA(6)
RA(5)
RA(4)
RA(3)

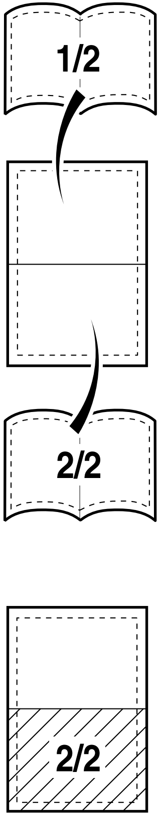
FHD MAIN ASSY (12/16)

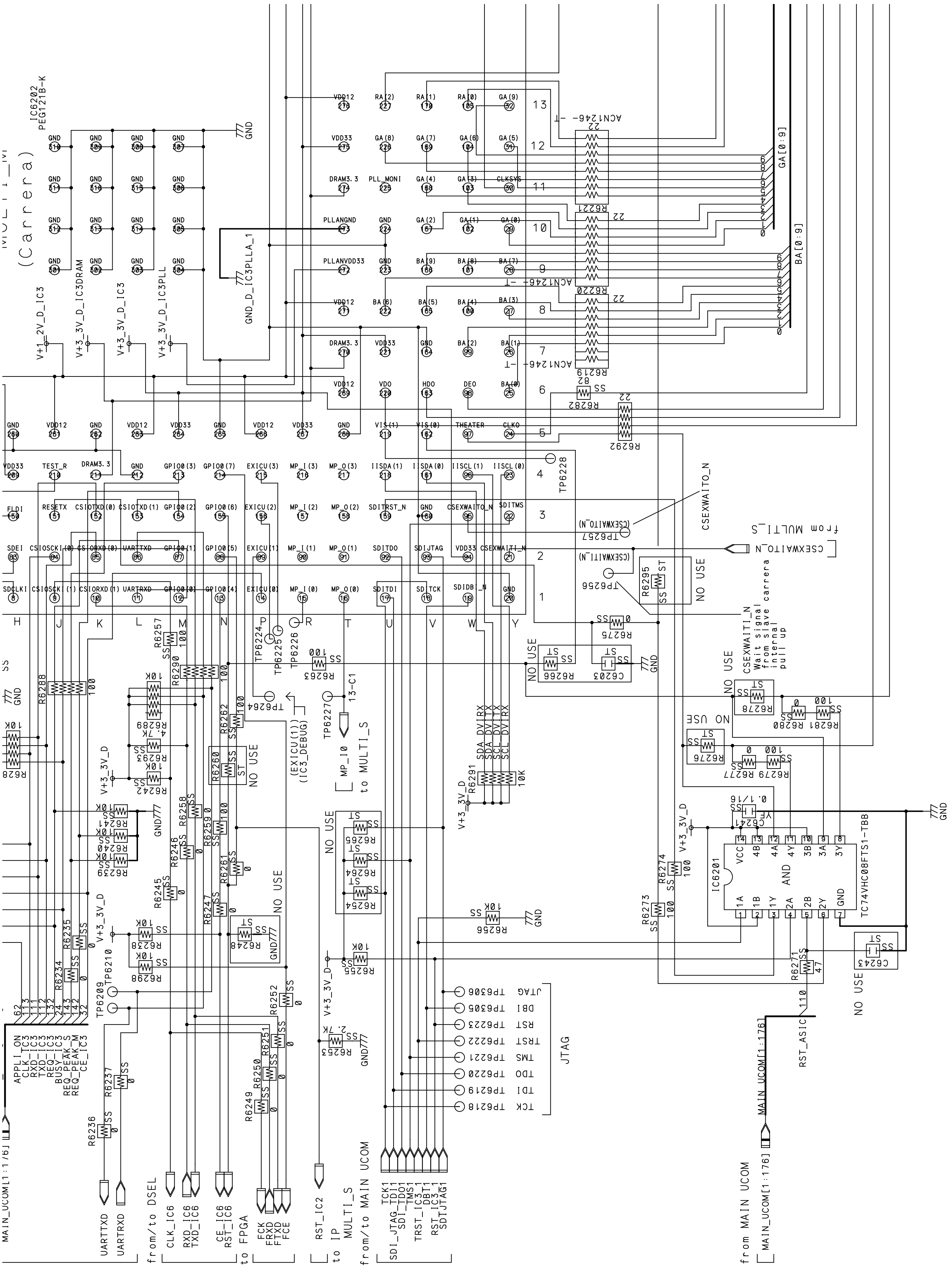
- MULTI_M BLOCK

NO USE


MULTI_M (Carrera)
IC6202
PEG121B-K
MPHASE
MFILM
MCYCLE
MVD
MHD
MDE
MDCLK
MGA[0:9]
MBA[0:9]
MRA[0:9]
from IP
R6201
R6202
R6203
R6204
BCN1070- -T
CLK2
no internal
pull up/down
R6226
10K
SS
GND
MANTA writing
H:Bus idle
internal
pull down
TP6201 TEST_I0
TP6202 TEST_I1
TP6203 TEST_I2
RA_F1OUT[0:7]
GA_F1OUT[0:7]
BA_F1OUT[0:7]
VDA_F1OUT
HDA_F1OUT
DEA_F1OUT
CLKA_F1OUT
FLDA_F1OUT
from FPGA
NO USE
V+3_3V_D_IC3FLASH1
C6207
ST
F6201
CCG1162- -T
V+3_3V_D
V+1_2V_D_IC3
C6208
L6206
BTX1042- -T
V+1_2V_D
V+3_3V_D_IC3
C6204
L6202
V+3_3V_D_IC3DRAM
C6205
L6204
V+3_3V_D_IC3PLL
C6206
10/6.3
ACG7046- -T
F6205
R6225
GND_D_IC3PLLA_1
CN6201
V+3_3V_D
GND
CLK_IC3
TXD_IC3
RXD_IC3
CE_IC3
BUSY_IC3
REQ_IC3
APPLI_ON
ST
R6296
R6288
R6287
10K
V+3_3V_D
V+1_2V_D_IC3
V+3_3V_D_IC3DRAM
R6234
R6235
MAIN_UCOM[1:176]
from/to MAIN UCOM
APPLI_ON
CLK_IC3
RXD_IC3
TXD_IC3
REQ_IC3
BUSY_IC3
REQ_PEAK_S
REQ_PEAK_M
CE_IC3
R6236
A B C D E F G H J
MGAI(7) MGAI(6) MGAI(5) MGAI(4) NC
MBAI(1) MBAI(0) MGAI(9) MGAI(8) VDD33
MBAI(4) MBAI(3) MBAI(2) GND VDD12
MBAI(7) MBAI(6) MBAI(5) DRAM3.3 GND
MRAI(1) MRAI(0) MBAI(9) MBAI(8) VDD12
MRAI(5) MRAI(4) MRAI(3) MRAI(2) NC
MRAI(9) MRAI(8) MRAI(7) MRAI(6) DRAM3.3
CLK2 TEST_I(2) TEST_I(1) TEST_I(0) VDD12
SRAI(3) SRAI(2) SRAI(1) SRAI(0) GND VDD12 VDD12 GND VDD12
SRAI(7) SRAI(6) SRAI(5) SRAI(4) SBAI(4) GND SHDI VDD33 TEST_R
SGAI(1) SGAI(3) GND SBAI(0) SBAI(3) VDD33 SVDI FLDI RESETX
SGAI(0) VDD33 SGAI(5) SGAI(7) SBAI(2) GND SBAI(7) SDEI CSIOSCKI(0)
GND SGAI(2) SGAI(4) SGAI(6) SBAI(1) SBAI(5) SBAI(6) SDCLKI CSIOSCK(1)

Large size SCH diagram




IC6202
PEG121B-K
(Carrera)
GND
V+1_2V_D_IC3
V+3_3V_D_IC3DRAM
V+3_3V_D_IC3
V+3_3V_D_IC3PLL
GND_D_IC3PLLA_1
VDD12
VDD33
DRAM3.3
PLLANGND
PLLANVDD33
PLL_MONI
RA(2)
RA(1)
RA(0)
GA[0:9]
BA[0:9]
GA(9)
GA(8)
GA(7)
GA(6)
GA(5)
GA(4)
GA(3)
GA(2)
GA(1)
GA(0)
CLKSYS
BA(9)
BA(8)
BA(7)
BA(6)
BA(5)
BA(4)
BA(3)
BA(2)
BA(1)
BA(0)
VDO
HDO
DEO
VIS(1)
VIS(0)
THEATER
CLKO
TEST_R
GPIO0(3)
GPIO0(7)
EXICU(3)
MP_I(3)
MP_O(3)
IISDA(1)
IISDA(0)
IISCL(1)
IISCL(0)
FLDI
RESETX
CSIOTXD(0)
CSIOTXD(1)
GPIO0(2)
GPIO0(6)
EXICU(2)
MP_I(2)
MP_O(2)
SDITRST_N
CSEXWAITO_N
SDITMS
SDEI
CSIOSCKI(0)
CSIORXD(0)
UARTTXD
GPIO0(1)
GPIO0(5)
EXICU(1)
MP_I(1)
MP_O(1)
SDITDO
SDIJTAG
CSEXWAITI_N
SDCLKI
CSIOSCKI(1)
CSIORXD(1)
UARTRXD
GPIO0(0)
GPIO0(4)
EXICU(0)
MP_I(0)
MP_O(0)
SDITDI
SDITCK
SDIDBI_N
ACN1246-T
R6221
R6220
R6219
22
R6282
82
R6292
TP6228
TP6257
TP6256
(CSEXWAITO_N)
(CSEXWAITI_N)
CSEXWAITO_N
from MULTI_S
CSEXWAITI_N
Wait signal from slave carrera internal pull up
NO USE
R6295
R6275
R6266
C6203
R6278
R6280
R6281
R6276
R6277
R6279
TP6224
TP6225
TP6226
TP6227
TP6264
R6263
13-C1
MP_IO
to MULTI_S
(EXICU(1))
(IC3_DEBUG)
R6257
R6290
R6288
R6289
R6293
R6242
R6262
R6260
R6241
R6240
R6239
R6258
R6259
R6246
R6261
R6245
R6247
R6248
R6235
R6234
R6238
R6298
TP6210
TP6209
R6252
R6251
R6250
R6249
R6237
R6236
R6253
R6265
R6264
R6254
R6256
R6255
R6291
SDA_DVIRX
SDA_DVITX
SCL_DVITX
SCL_DVIRX
V+3_3V_D
10K
4.7K
100
0
2.7K
0.1/16
C6241
IC6201
TC74VHC08FTS1-TBB
VCC
AND
GND
R6274
R6273
R6271
C6243
47
RST_ASIC
110
MAIN_UCOM[1:176]
from MAIN UCOM
JTAG
TCK TP6218
TDI TP6219
TDO TP6220
TMS TP6221
TRST TP6222
RST TP6223
DBI TP6305
JTAG TP6306
APPLI_ON
CLK_IC3
RXD_IC3
TXD_IC3
REQ_IC3
BUSY_IC3
REQ_PEAK_S
REQ_PEAK_M
CE_IC3
UARTTXD
UARTRXD
from/to DSEL
CLK_IC6
RXD_IC6
TXD_IC6
CE_IC6
RST_IC6
to FPGA
FCK
FRXD
FTXD
FCE
RST_IC2
to IP
MULTI_S
from/to MAIN UCOM
TCK1
SDI_JTAG_TDI1
SDI_TDO1
SDI_TMS1
TRST_IC3_1
RST_IC3_1
DBI_IC3_1
SDITJTAG1
SS
ST

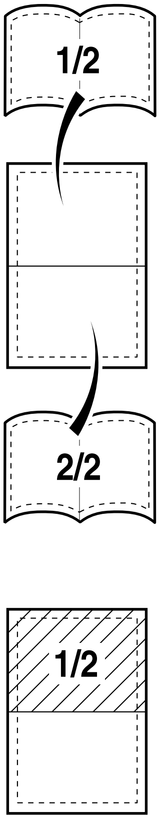
1.47 FHD MAIN ASSY (13/16)

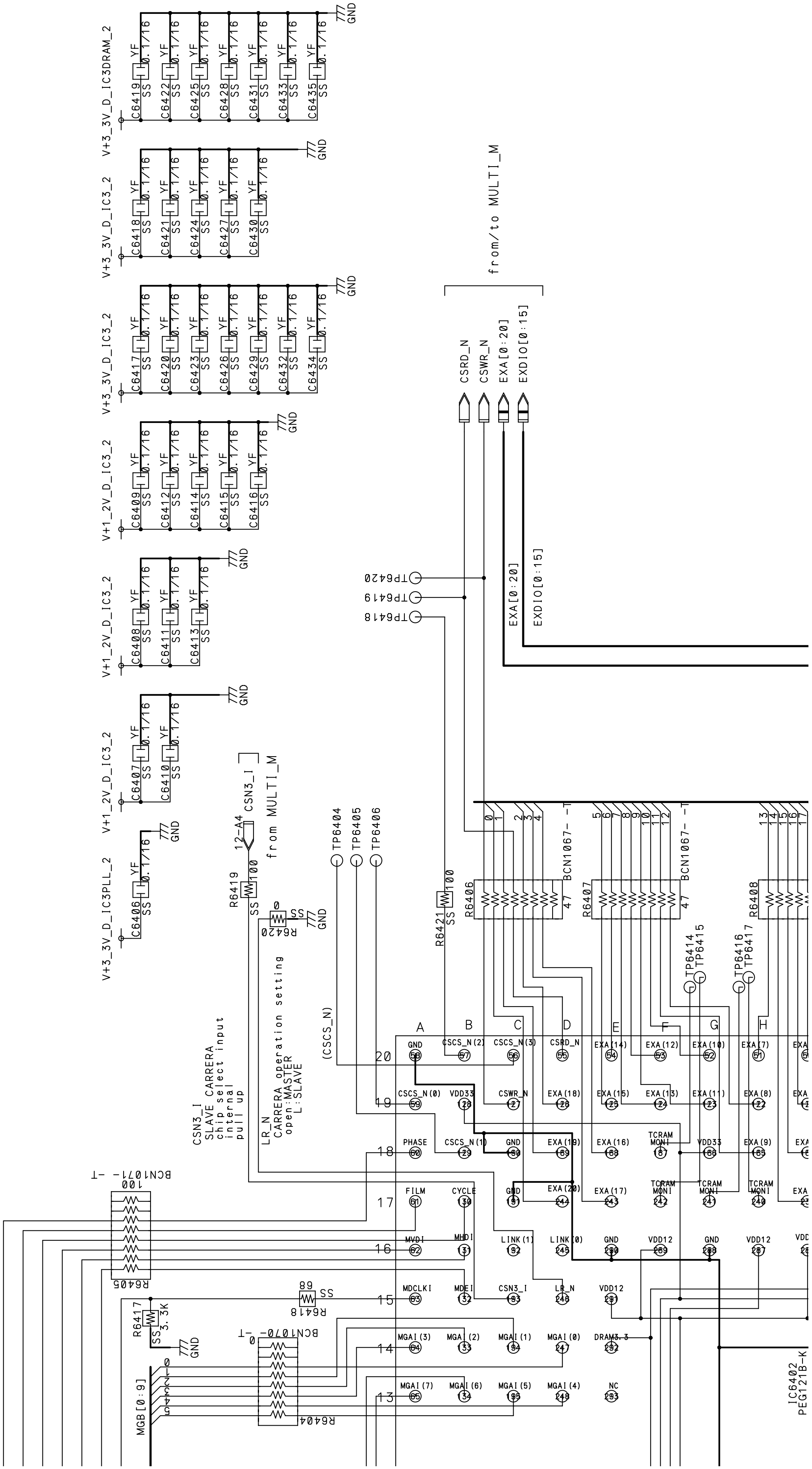
FHD MAIN ASSY (13/16)

- MULTI_S BLOCK

NO USE

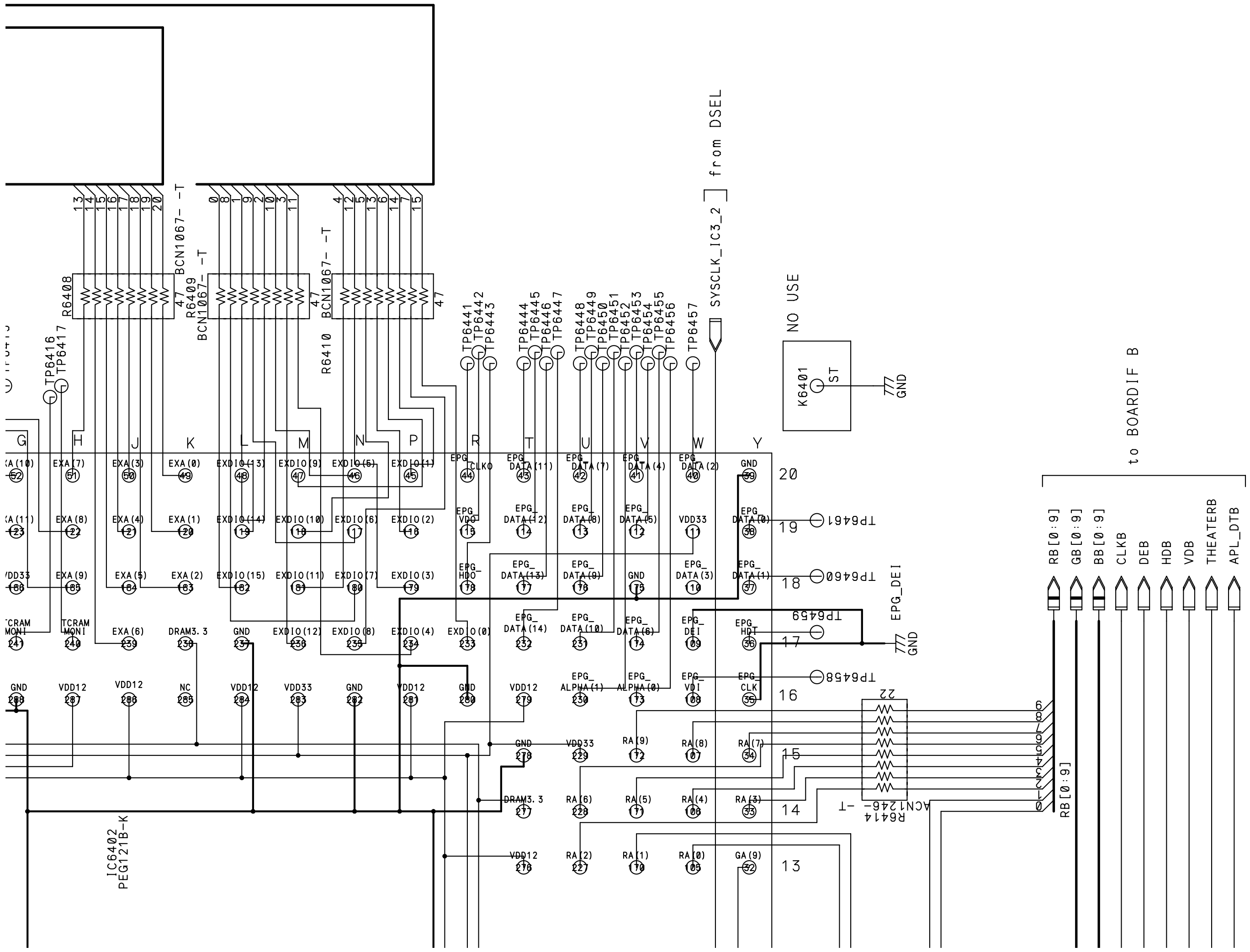
Large size SCH diagram





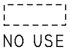
V+3_3V_D_IC3DRAM_2
C6419 C6422 C6425 C6428 C6431 C6433 C6435
SS YF 0.1/16
GND
V+3_3V_D_IC3_2
C6418 C6421 C6424 C6427 C6430
V+3_3V_D_IC3_2
C6417 C6420 C6423 C6426 C6429 C6432 C6434
V+1_2V_D_IC3_2
C6409 C6412 C6414 C6415 C6416
V+1_2V_D_IC3_2
C6408 C6411 C6413
V+1_2V_D_IC3_2
C6407 C6410
V+3_3V_D_IC3PLL_2
C6406
from/to MULTI_M
CSRD_N
CSWR_N
EXA[0:20]
EXDIO[0:15]
TP6420
TP6419
TP6418
EXA[0:20]
EXDIO[0:15]
CSN3_I
12-A4
from MULTI_M
R6419 100 SS
R6420 0 SS
TP6404
TP6405
TP6406
R6421 100 SS
R6406 47 BCN1067- -T
R6407 47 BCN1067- -T
R6408
TP6414
TP6415
TP6416
TP6417
CSN3_I SLAVE CARRERA chip select input internal pull up
LR_N CARRERA operation setting open:MASTER L:SLAVE
(CSCS_N)
A B C D E F G H
20 GND CSCS_N(2) CSCS_N(3) CSRD_N EXA(14) EXA(12) EXA(10) EXA(7)
19 CSCS_N(0) VDD33 CSWR_N EXA(18) EXA(15) EXA(13) EXA(11) EXA(8)
18 PHASE CSCS_N(1) GND EXA(19) EXA(16) TCRAM MONI VDD33 EXA(9)
17 FILM CYCLE GND EXA(20) EXA(17) TCRAM MONI TCRAM MONI TCRAM MONI
16 MVDI MHDI LINK(1) LINK(0) GND VDD12 GND VDD12
15 MDCLKI MDEI CSN3_I LR_N VDD12
14 MGAI(3) MGAI(2) MGAI(1) MGAI(0) DRAM3.3
13 MGAI(7) MGAI(6) MGAI(5) MGAI(4) NC
BCN1071- -T 100 R6405
R6418 68 SS
R6417 3.3K SS
GND
BCN1070- -T 0 R6404
MGB[0:9]
IC6402 PEG121B-K

	USED	VACANT
C	6401-6437	
F	6403-6403	
IC	6401-6402	
K	6401-6401	
L	6401-6404	6403,
R	6401-6462	6435, 6461,
TP	6401-6465	

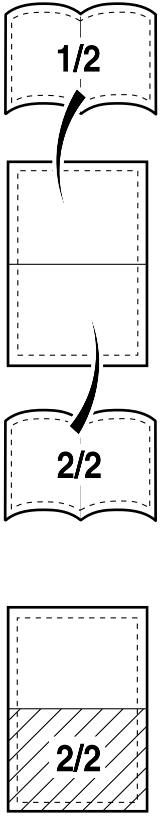

R6408
47
BCN1067- -T
R6409
BCN1067- -T
R6410
BCN1067- -T
13 14 15 16 17 18 19 20
0 8 1 9 2 10 3 11
4 12 5 13 6 14 7 15
TP6416
TP6417
TP6441
TP6442
TP6443
TP6444
TP6445
TP6446
TP6447
TP6448
TP6449
TP6450
TP6451
TP6452
TP6453
TP6454
TP6455
TP6456
TP6457
SYSCLK_IC3_2
from DSEL
NO USE
K6401
ST
GND
to BOARDIF B
G H J K L M N P R T U V W Y
EXA(10) EXA(7) EXA(3) EXA(0) EXDIO(13) EXDIO(9) EXDIO(5) EXDIO(1) EPG_CLKO EPG_DATA(11) EPG_DATA(7) EPG_DATA(4) EPG_DATA(2) GND
20
EXA(11) EXA(8) EXA(4) EXA(1) EXDIO(14) EXDIO(10) EXDIO(6) EXDIO(2) EPG_VDO EPG_DATA(12) EPG_DATA(8) EPG_DATA(5) VDD33 EPG_DATA(0)
19
TP6461
VDD33 EXA(9) EXA(5) EXA(2) EXDIO(15) EXDIO(11) EXDIO(7) EXDIO(3) EPG_HDO EPG_DATA(13) EPG_DATA(9) GND EPG_DATA(3) EPG_DATA(1)
18
TP6460
EPG_DEI
TCRAM MONI TCRAM MONI EXA(6) DRAM3.3 GND EXDIO(12) EXDIO(8) EXDIO(4) EXDIO(0) EPG_DATA(14) EPG_DATA(10) EPG_DATA(6) EPG_DEI EPG_HDI
17
TP6459
GND
GND VDD12 VDD12 NC VDD12 VDD33 GND VDD12 GND VDD12 EPG_ALPHA(1) EPG_ALPHA(0) EPG_VDI EPG_CLK
16
TP6458
GND VDD33 RA(9) RA(8) RA(7)
15
DRAM3.3 RA(6) RA(5) RA(4) RA(3)
14
VDD12 RA(2) RA(1) RA(0) GA(9)
13
22
R6414
ACN1246- -T
RB[0:9]
RB[0:9]
GB[0:9]
BB[0:9]
CLKB
DEB
HDB
VDB
THEATERB
APL_DTB
IC6402
PEG121B-K

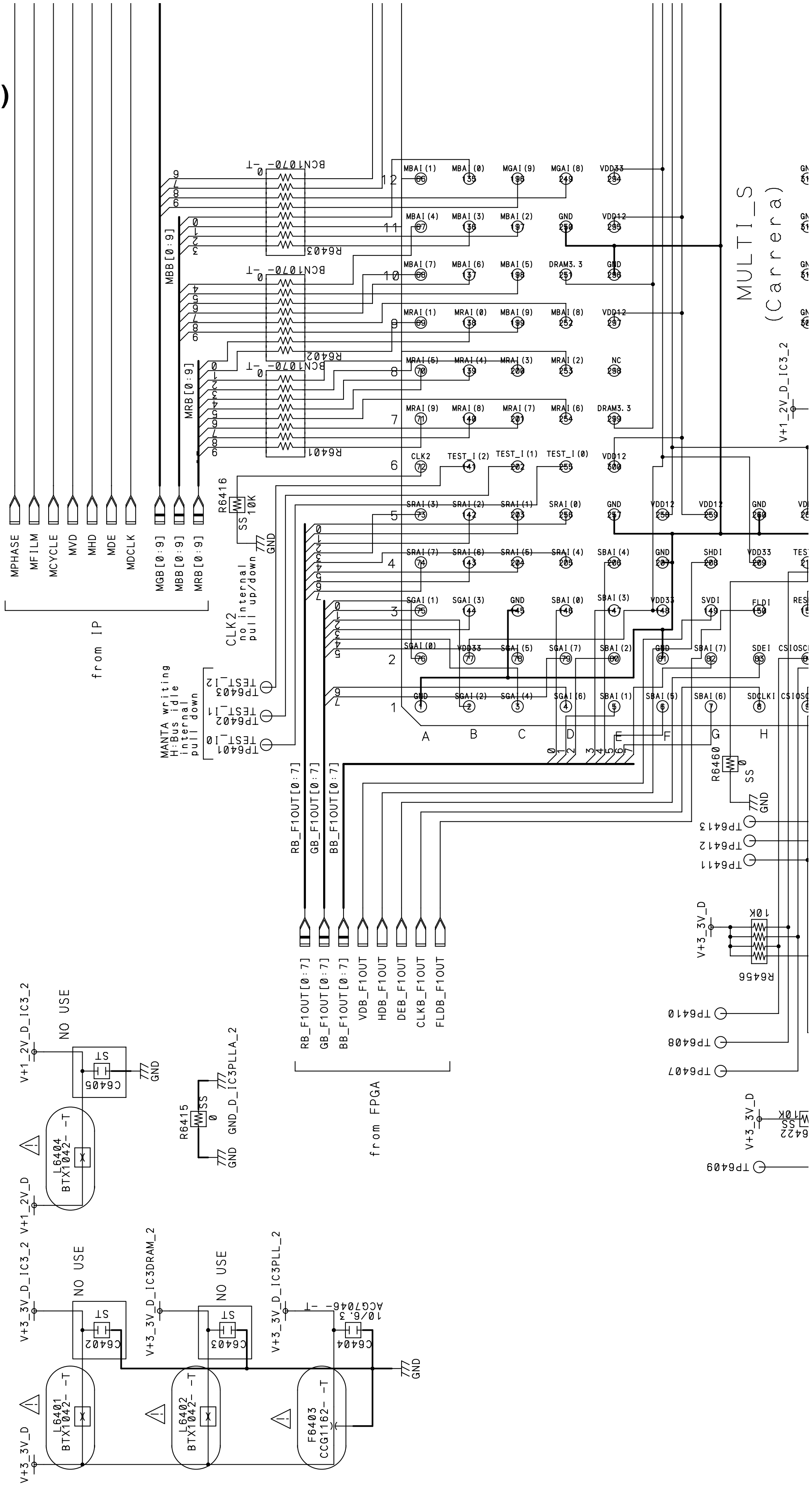
FHD MAIN ASSY (13/16)

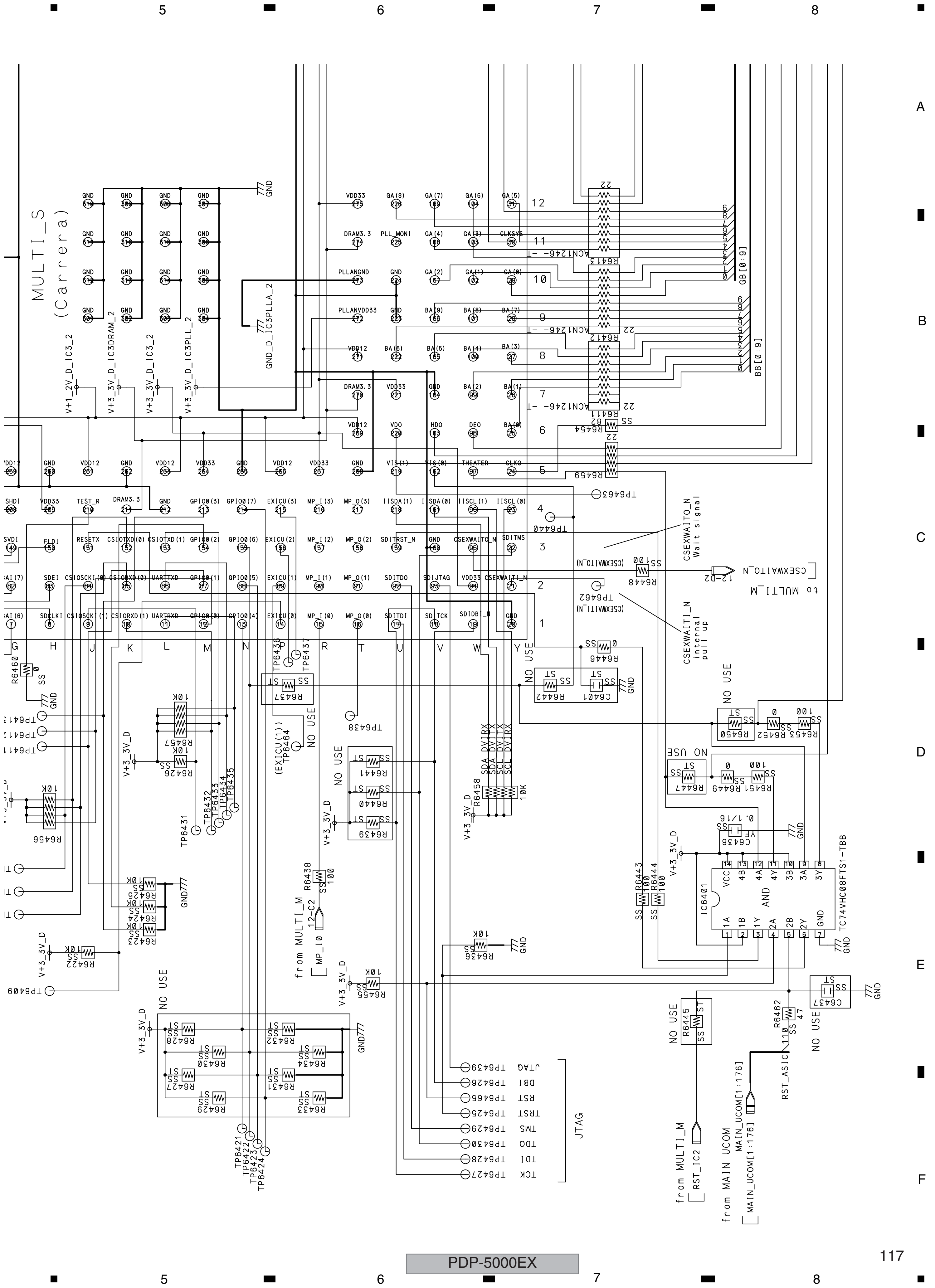
- MULTI_S BLOCK



Large size SCH diagram




MULTI_S
(Carrera)
BCN1070-_T
R6403
R6402
R6401
MBB[0:9]
MRB[0:9]
MPHASE
MFILM
MCYCLE
MVD
MHD
MDE
MDCLK
MGB[0:9]
MBB[0:9]
MRB[0:9]
from IP
MBAI(1) 66
MBAI(0) 135
MGAI(9) 198
MGAI(8) 249
VDD33 294
MBAI(4) 67
MBAI(3) 136
MBAI(2) 197
GND 250
VDD12 295
MBAI(7) 68
MBAI(6) 137
MBAI(5) 198
DRAM3.3 251
GND 296
MRAI(1) 69
MRAI(0) 138
MBAI(9) 199
MBAI(8) 252
VDD12 297
MRAI(5) 70
MRAI(4) 139
MRAI(3) 200
MRAI(2) 253
NC 298
MRAI(9) 71
MRAI(8) 140
MRAI(7) 201
MRAI(6) 254
DRAM3.3 299
CLK2 72
TEST_I(2) 141
TEST_I(1) 202
TEST_I(0) 255
VDD12 300
SRAI(3) 73
SRAI(2) 142
SRAI(1) 203
SRAI(0) 256
GND 257
VDD12 258
VDD12 259
GND 260
SRAI(7) 74
SRAI(6) 143
SRAI(5) 204
SRAI(4) 205
SBAI(4) 206
GND 207
SHDI 208
VDD33 209
SGAI(1) 75
SGAI(3) 144
GND 145
SBAI(0) 146
SBAI(3) 147
VDD33 148
SVDI 149
FLDI 150
SGAI(0) 76
VDD33 77
SGAI(5) 78
SGAI(7) 79
SBAI(2) 80
GND 81
SBAI(7) 82
SDEI 83
CSIOSC
GND 1
SGAI(2) 2
SGAI(4) 3
SGAI(6) 4
SBAI(1) 5
SBAI(5) 6
SBAI(6) 7
SDCLKI 8
12 11 10 9 8 7 6 5 4 3 2 1
A B C D E F G H
R6416 SS 10K GND
CLK2 no internal pull up/down
MANTA writing H:Bus idle internal pull down
TEST_I2 TP6403
TEST_I1 TP6402
TEST_I0 TP6401
RB_F1OUT[0:7]
GB_F1OUT[0:7]
BB_F1OUT[0:7]
VDB_F1OUT
HDB_F1OUT
DEB_F1OUT
CLKB_F1OUT
FLDB_F1OUT
from FPGA
R6460 SS 0 GND
TP6413
TP6412
TP6411
V+3_3V_D
10K
R6456
TP6410
TP6408
TP6407
V+3_3V_D
10K SS R6422
TP6409
V+1_2V_D_IC3_2
NO USE
C6405 ST GND
L6404 BTX1042-_T
V+1_2V_D
R6415 SS 0 GND_D_IC3PLLA_2 GND
V+3_3V_D_IC3_2
NO USE
C6402 ST
V+3_3V_D_IC3DRAM_2
NO USE
C6403 ST
V+3_3V_D_IC3PLL_2
ACG7046-_T 10/6.3 C6404
GND
L6401 BTX1042-_T
L6402 BTX1042-_T
F6403 CCG1162-_T
V+3_3V_D



5
6
7
8
A
B
C
D
E
F
MULTI_S
(Carrera)
GND
GND_D_IC3PLLA_2
V+1_2V_D_IC3_2
V+3_3V_D_IC3DRAM_2
V+3_3V_D_IC3_2
V+3_3V_D_IC3PLL_2
VDD33
DRAM3.3
PLLANGND
PLLANVDD33
VDD12
PLL_MONI
CLKSYS
VDO
HDO
DEO
VIS(1)
VIS(0)
THEATER
CLKO
ACN1246-T
R6413
R6412
R6411
R6454
R6459
GB[0:9]
BB[0:9]
TP6463
TP6440
TP6462
CSEXWAITO_N
Wait signal
CSEXWAITI_N
internal pull up
(CSEXWAITO_N)
(CSEXWAITI_N)
R6448
12-D2
CSEXWAITO_N
to MULTI_M
SHDI
TEST_R
GPIO0(3)
GPIO0(7)
EXICU(3)
MP_I(3)
MP_O(3)
IISDA(1)
IISDA(0)
IISCL(1)
IISCL(0)
SVDI
FLDI
RESETX
CSIOTXD(0)
CSIOTXD(1)
GPIO0(2)
GPIO0(6)
EXICU(2)
MP_I(2)
MP_O(2)
SDITRST_N
CSEXWAITO_N
SDITMS
SDEI
CSIOSCK(0)
CSIORXD(0)
UARTTXD
GPIO0(1)
GPIO0(5)
EXICU(1)
MP_I(1)
MP_O(1)
SDITDO
SDIJTAG
CSEXWAITI_N
SDCLKI
CSIOSCK(1)
CSIORXD(1)
UARTRXD
GPIO0(0)
GPIO0(4)
EXICU(0)
MP_I(0)
MP_O(0)
SDITDI
SDITCK
SDIDBI_N
G H J K L M N P R T U V W Y
NO USE
R6446
R6442
C6401
R6437
TP6436
TP6437
TP6438
(EXICU(1))
TP6464
R6441
R6440
R6439
SDA_DVIRX
SDA_DV_TX
SCL_DV_TX
SCL_DVIRX
R6458
10K
R6460
R6457
R6426
R6456
TP6431
TP6432
TP6433
TP6434
TP6435
V+3_3V_D
R6425
R6424
R6423
R6422
TP6409
R6438
from MULTI_M
12-C2
MP_I0
R6455
R6436
R6428
R6432
R6430
R6434
R6427
R6431
R6429
R6433
TP6421
TP6422
TP6423
TP6424
JTAG TP6439
DBI TP6426
RST TP6465
TRST TP6425
TMS TP6429
TDO TP6430
TDI TP6428
TCK TP6427
JTAG
R6450
R6452
R6453
R6447
R6449
R6451
C6436
0.1/16
YF
IC6401
TC74VHC08FTS1-TBB
AND
VCC
R6443
R6444
C6437
R6462
R6445
RST_ASIC
from MULTI_M
RST_IC2
from MAIN UCOM
MAIN_UCOM[1:176]

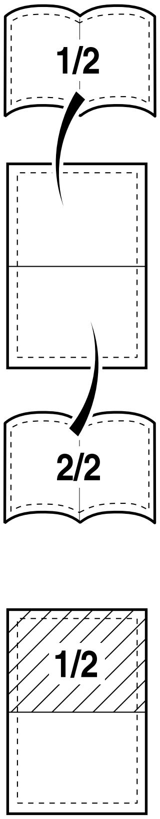
1.48 FHD MAIN ASSY (14/16)

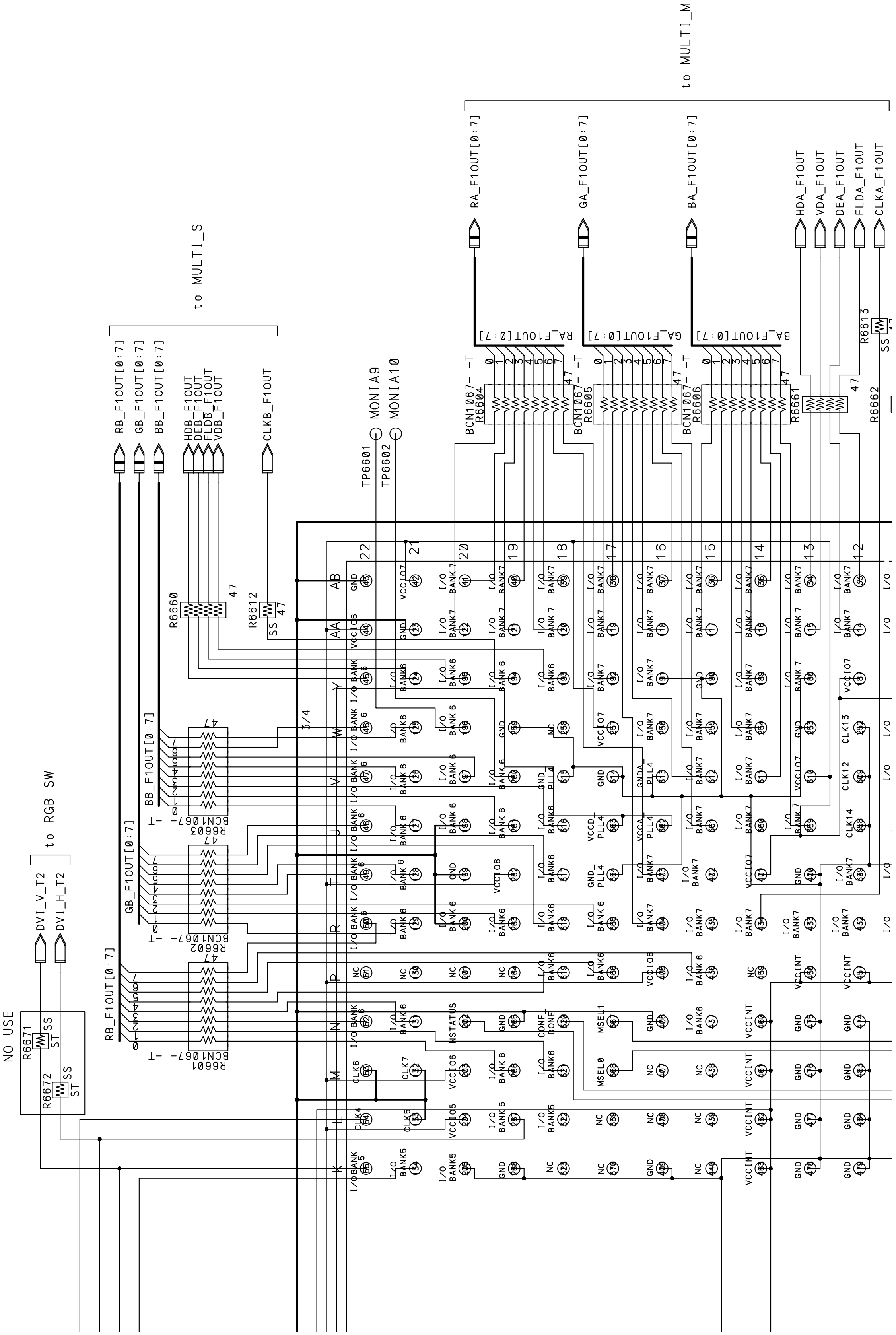
FHD MAIN ASSY (14/16)

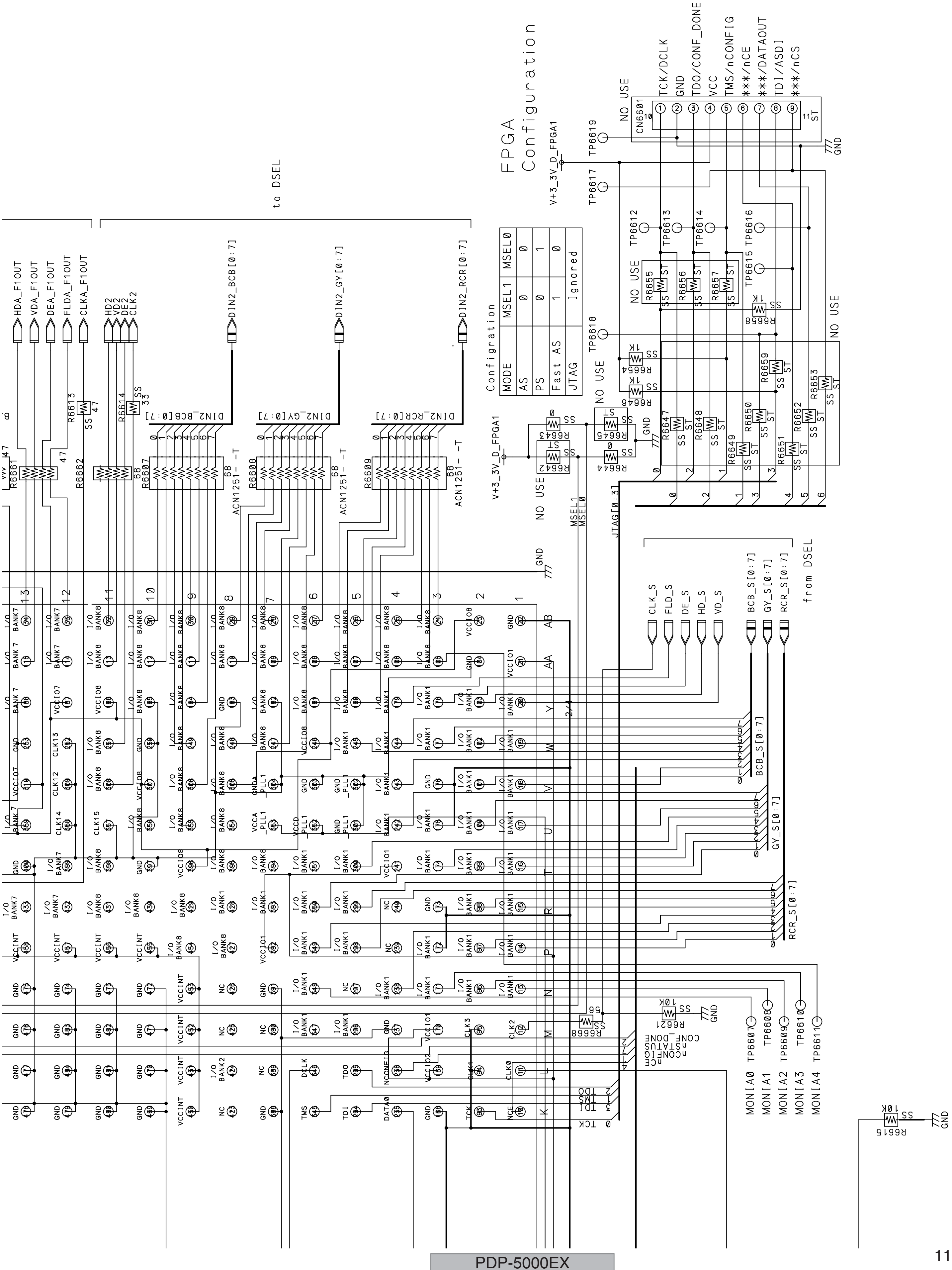
- FPGA BLOCK

NO USE

Large size SCH diagram




to MULTI_M
RA_F1OUT[0:7]
GA_F1OUT[0:7]
BA_F1OUT[0:7]
HDA_F1OUT
VDA_F1OUT
DEA_F1OUT
FLDA_F1OUT
CLKA_F1OUT
R6613
SS
47
R6662
BCN1067-T
R6604
R6605
R6606
R6661
47
to MULTI_S
RB_F1OUT[0:7]
GB_F1OUT[0:7]
BB_F1OUT[0:7]
HDB_F1OUT
DEB_F1OUT
FLDB_F1OUT
VDB_F1OUT
CLKB_F1OUT
TP6601
TP6602
MONIA9
MONIA10
R6660
47
R6612
47
SS
R6603
R6602
R6601
BCN1067-T
BB_F1OUT[0:7]
GB_F1OUT[0:7]
RB_F1OUT[0:7]
3/4
to RGB SW
DVI_V_T2
DVI_H_T2
NO USE
R6671
R6672
SS
ST
AB
AA
Y
W
V
U
T
R
P
N
M
L
K
22
21
20
19
18
17
16
15
14
13
12
GND
VCCIO7
VCCIO6
I/O BANK7
I/O BANK6
I/O BANK5
GNDA PLL4
VCCD PLL4
VCCA PLL4
GND PLL4
CLK12
CLK13
CLK14
CLK4
CLK5
CLK6
CLK7
NC
NSTATUS
CONF_DONE
MSEL1
MSEL0
VCCINT
VCCIO5

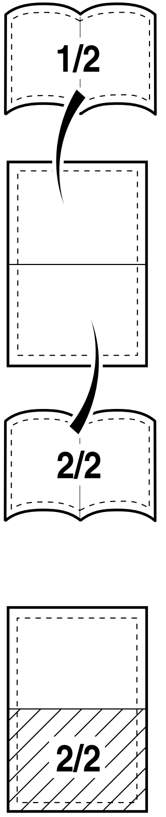

FPGA Configuration
V+3_3V_D_FPGA1
TP6619
TP6617
CN6601
NO USE
TCK/DCLK
GND
TDO/CONF_DONE
VCC
TMS/nCONFIG
***/nCE
***/DATAOUT
TDI/ASDI
***/nCS
TP6612
TP6613
TP6614
TP6615
TP6616
TP6618
R6655
R6656
R6657
R6658
R6654
R6646
R6645
R6643
R6642
R6644
R6647
R6648
R6649
R6650
R6651
R6652
R6653
R6659
Configration
MODE | MSEL1 | MSEL0
AS | 0 | 0
PS | 0 | 1
Fast AS | 1 | 0
JTAG | Ignored
to DSEL
HDA_F1OUT
VDA_F1OUT
DEA_F1OUT
FLDA_F1OUT
CLKA_F1OUT
HD2
VD2
DE2
CLK2
DIN2_BCB[0:7]
DIN2_GY[0:7]
DIN2_RCR[0:7]
R6613
R6614
R6661
R6662
R6607
R6608
R6609
ACN1251-T
MSEL1
MSEL0
JTAG[0:3]
GND
from DSEL
CLK_S
FLD_S
DE_S
HD_S
VD_S
BCB_S[0:7]
GY_S[0:7]
RCR_S[0:7]
R6668
R6621
10K
CONF_DONE
nSTATUS
nCONFIG
nCE
TDO
TMS
TDI
TCK
MONIA0
MONIA1
MONIA2
MONIA3
MONIA4
TP6607
TP6608
TP6609
TP6610
TP6611
R6615
AB
AA
Y
W
V
U
T
R
P
N
M
L
K

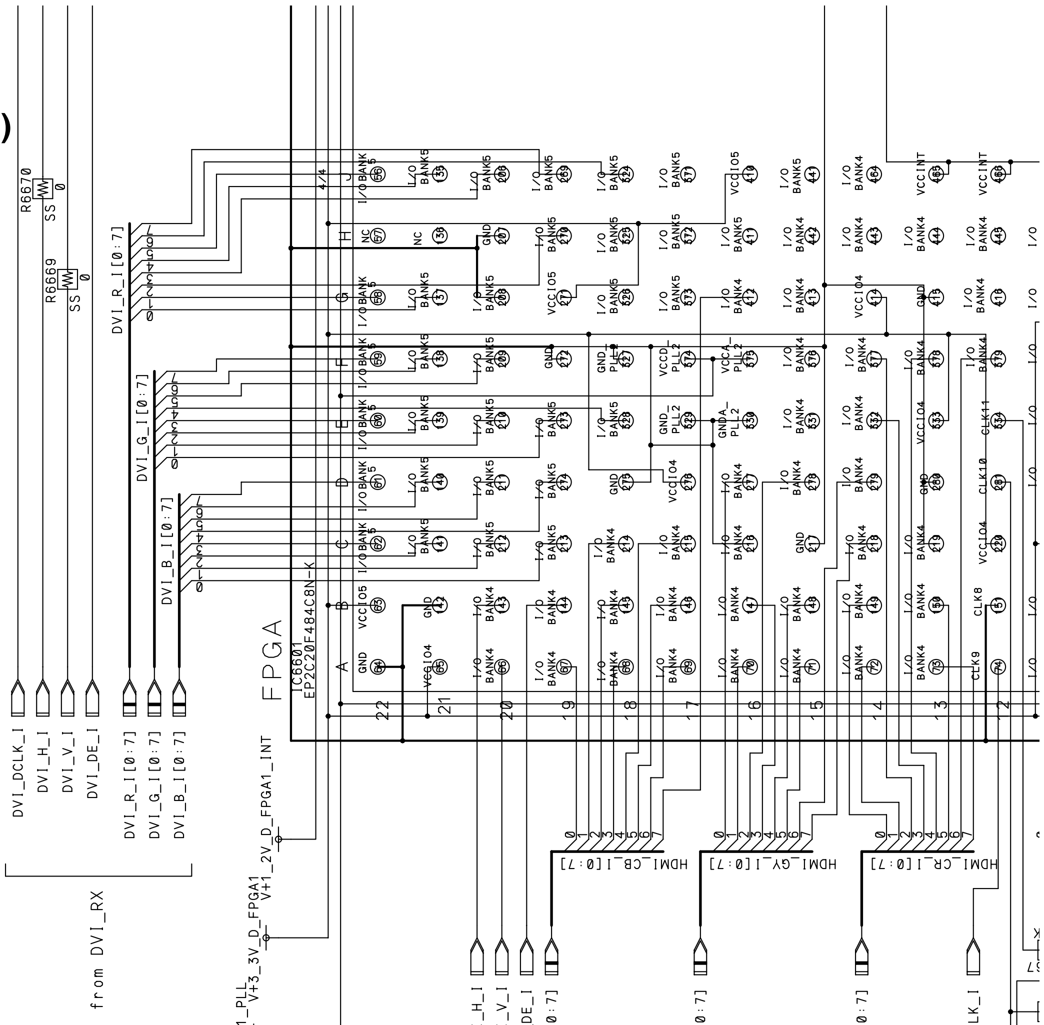
FHD MAIN ASSY (14/16)

- FPGA BLOCK

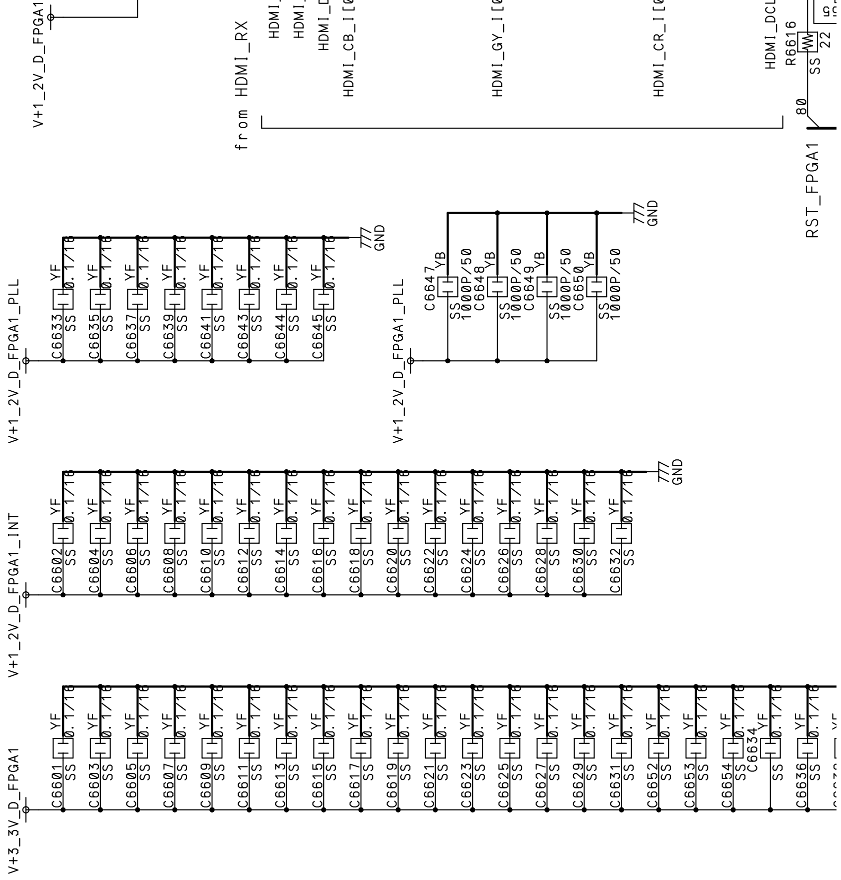
NO USE

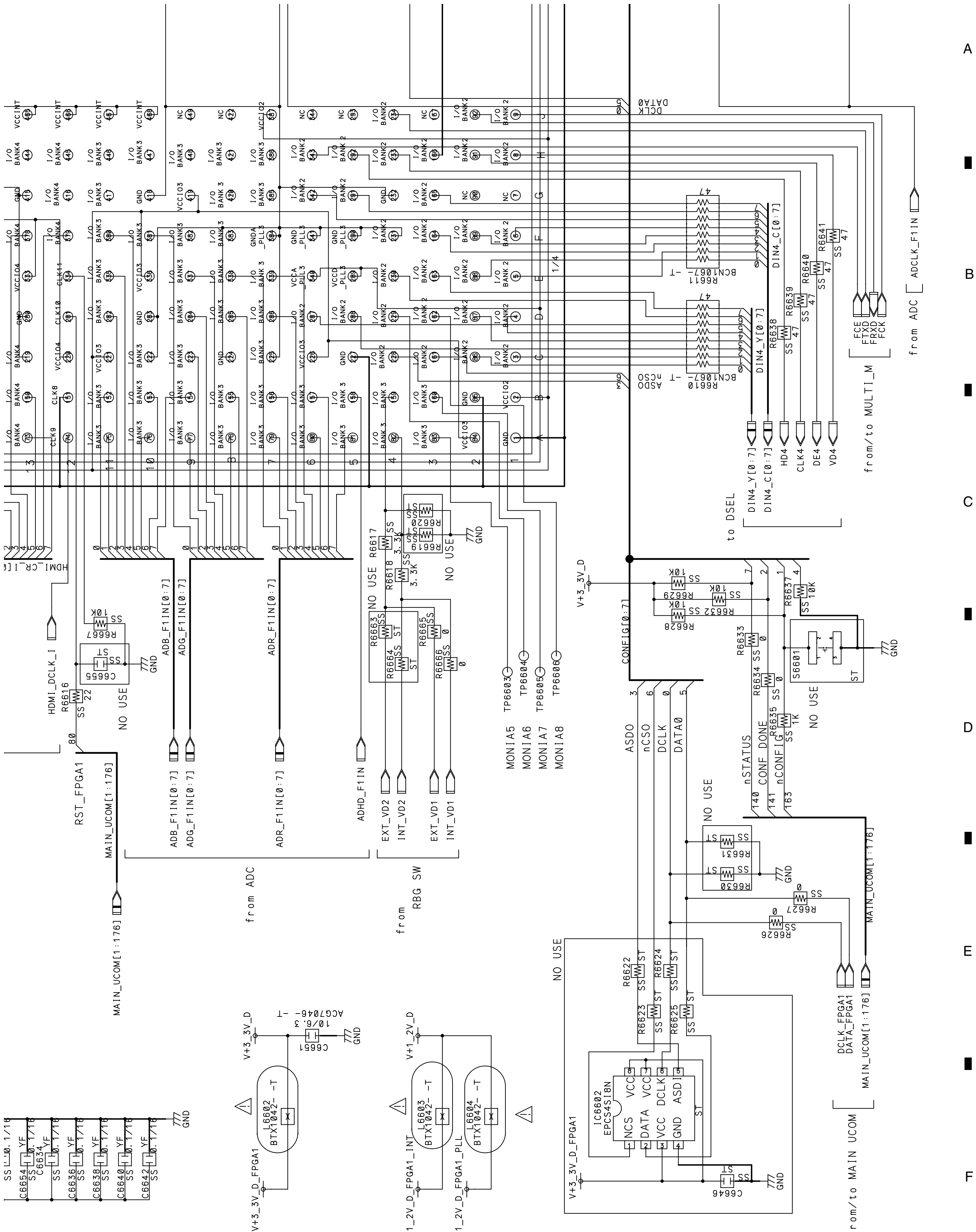
Large size SCH diagram




R6670
SS 0
R6669
SS 0
DVI_R_I[0:7]
DVI_G_I[0:7]
DVI_B_I[0:7]
DVI_DCLK_I
DVI_H_I
DVI_V_I
DVI_DE_I
DVI_R_I[0:7]
DVI_G_I[0:7]
DVI_B_I[0:7]
from DVI_RX
FPGA
IC6601
EP2C20F484C8N-K
4/4
V+1_2V_D_FPGA1_INT
V+1_2V_D_FPGA1
V+3_3V_D_FPGA1
HDMI_CB_I[0:7]
HDMI_GY_I[0:7]
HDMI_CR_I[0:7]
I/O BANK5
I/O BANK4
VCCIO5
VCCIO4
VCCINT
GND
NC
GND_PLL2
VCCD_PLL2
VCCA_PLL2
GNDA_PLL2
CLK8
CLK9
CLK10
CLK11

	USED	VACANT
C	6601-6655	
CN	6601-6601	
IC	6601-6602	
L	6602-6604	
R	6601-6672	6636,
S	6601-6601	
TP	6601-6619	


V+1_2V_D_FPGA1_PLL
HDMI_H_I
HDMI_V_I
HDMI_DE_I
HDMI_CB_I[0:7]
HDMI_GY_I[0:7]
HDMI_CR_I[0:7]
HDMI_DCLK_I
from HDMI_RX
R6616
SS 22
80
RST_FPGA1
GND
V+1_2V_D_FPGA1_PLL
C6633 C6635 C6637 C6639 C6641 C6643 C6644 C6645
SS YF 0.1/16
C6647 C6648 C6649 C6650
SS YB 1000P/50
V+1_2V_D_FPGA1_INT
C6602 C6604 C6606 C6608 C6610 C6612 C6614 C6616 C6618 C6620 C6622 C6624 C6626 C6628 C6630 C6632
V+3_3V_D_FPGA1
C6601 C6603 C6605 C6607 C6609 C6611 C6613 C6615 C6617 C6619 C6621 C6623 C6625 C6627 C6629 C6631 C6652 C6653 C6654 C6634 C6636

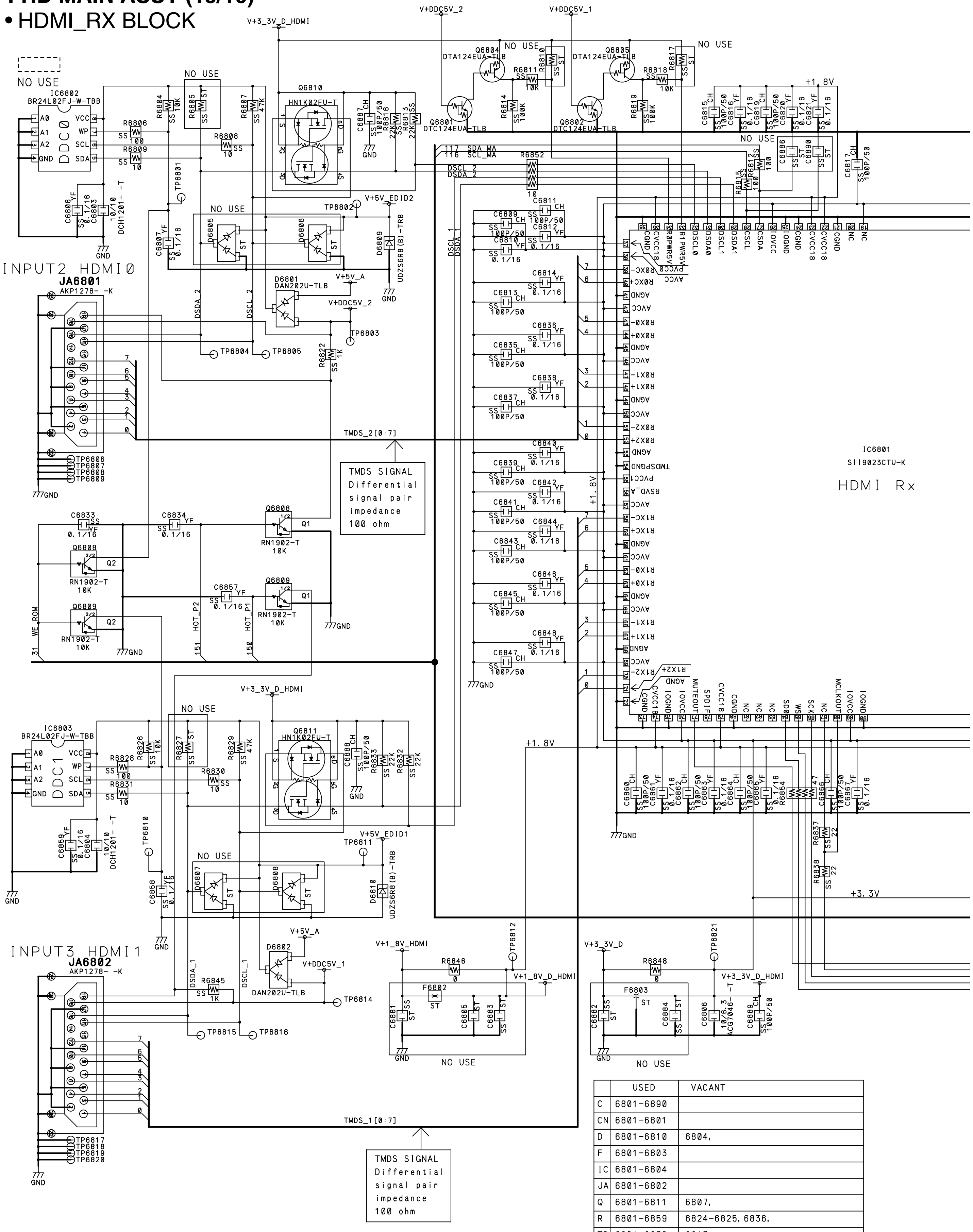


A
B
C
D
E
F
VCCINT
I/O BANK4
I/O BANK3
I/O BANK2
NC
GND
VCCIO2
VCCIO3
VCCIO4
CLK8
CLK9
CLK10
CLK11
GNDA_PLL3
GND_PLL3
VCCA_PLL3
VCCD_PLL3
DATA0
DCLK
nCSO
ASDO
R6610 BCN1067-T
R6611 BCN1067-T
47
DIN4_Y[0:7]
DIN4_C[0:7]
HD4
CLK4
DE4
VD4
to DSEL
from/to MULTI_M
R6638
R6639
R6640
R6641
SS 47
FCE
FTXD
FRXD
FCK
from ADC
ADCLK_F1IN
HDMI_CR_I[
HDMI_DCLK_I
R6616 SS 22
R6667 SS 10K
C6655 SS ST
GND
NO USE
80
RST_FPGA1
MAIN_UCOM[1:176]
ADB_F1IN[0:7]
ADG_F1IN[0:7]
ADR_F1IN[0:7]
ADHD_F1IN
from ADC
R6617 SS 3.3K
R6618 SS 3.3K
R6619 SS
R6620 SS
NO USE
R6663 SS
R6664 SS ST
R6665 SS 0
R6666 SS 0
EXT_VD2
INT_VD2
EXT_VD1
INT_VD1
from RBG SW
TP6603
TP6604
TP6605
TP6606
MONIA5
MONIA6
MONIA7
MONIA8
V+3_3V_D
CONFIG[0:7]
R6628 SS 10K
R6629 SS 10K
R6632 SS 10K
R6637 SS 10K
R6633 SS 0
R6634 SS 0
R6635 SS 1K
S6601 ST
NO USE
ASDO
nCSO
DCLK
DATA0
nSTATUS
CONF_DONE
nCONFIG
140
141
163
R6630 SS ST
R6631 SS ST
R6626 SS 0
R6627 SS 0
DCLK_FPGA1
DATA_FPGA1
MAIN_UCOM[1:176]
from/to MAIN UCOM
R6622 SS ST
R6623 SS ST
R6624 SS ST
R6625 SS ST
IC6602 EPCS4SI8N
NCS
DATA
VCC
GND
DCLK
ASDI
ST
C6646 SS ST
V+3_3V_D_FPGA1
C6651 10/6.3 ACG7046-T
L6602 BTX1042-T
L6603 BTX1042-T
L6604 BTX1042-T
V+1_2V_D
V+1_2V_D_FPGA1_INT
V+1_2V_D_FPGA1_PLL
C6634 C6636 C6638 C6640 C6642 C6654
SS 0.1/16 YF

1.49 FHD MAIN ASSY (15/16)

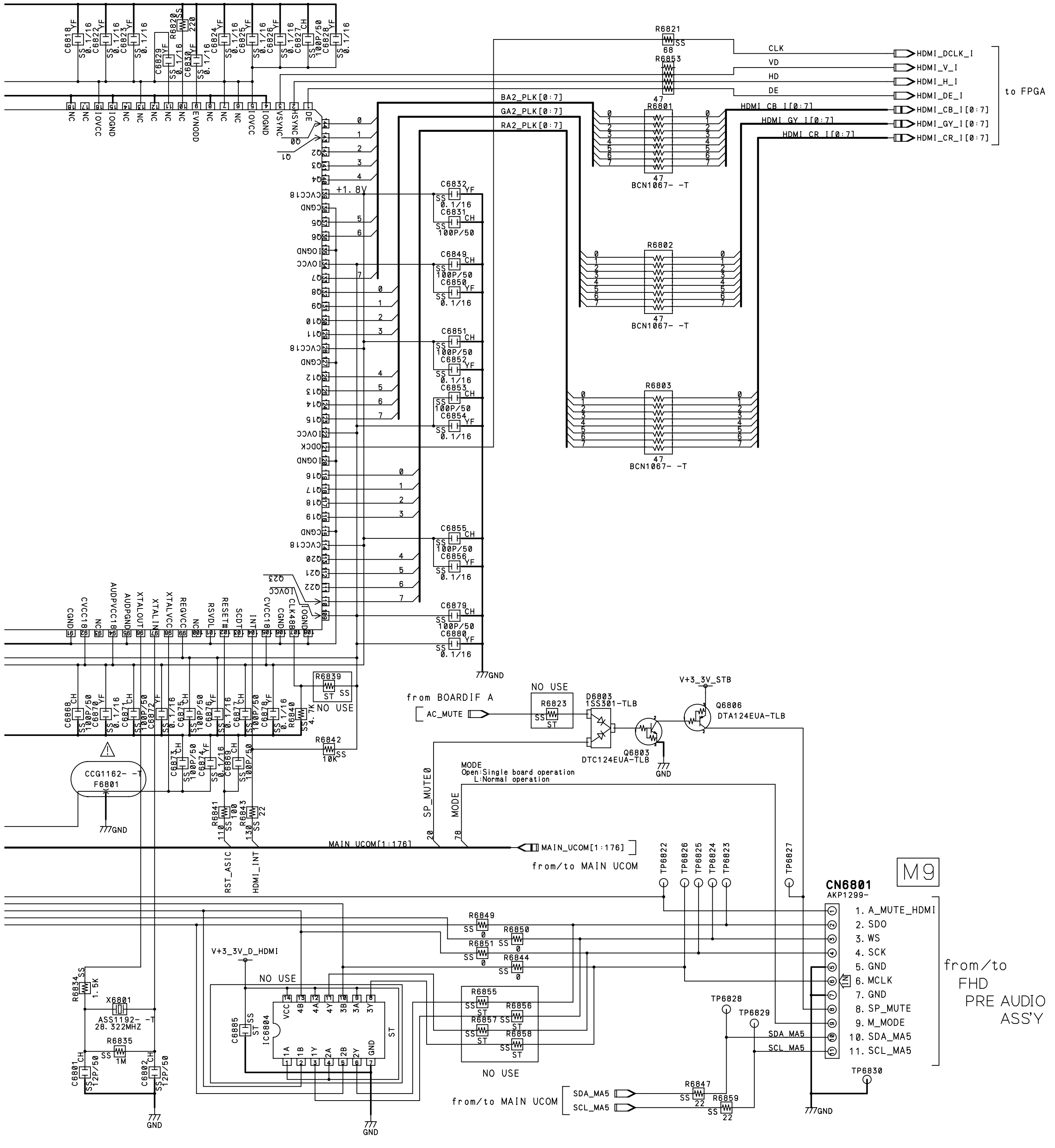
FHD MAIN ASSY (15/16)

- HDMI_RX BLOCK



V+3_3V_D_HDMI
V+DDC5V_2
V+DDC5V_1
NO USE
IC6802
BR24L02FJ-W-TBB
DDC0
IC6803
BR24L02FJ-W-TBB
DDC1
INPUT2 HDMI0
JA6801
AKP1278- -K
INPUT3 HDMI1
JA6802
AKP1278- -K
Q6804
DTA124EUA-TLB
Q6805
DTA124EUA-TLB
Q6801
DTC124EUA-TLB
Q6802
DTC124EUA-TLB
Q6810
HN1K02FU-T
Q6811
HN1K02FU-T
Q6806
Q6808
Q6809
RN1902-T
10K
D6801
DAN202U-TLB
D6802
DAN202U-TLB
D6805
D6806
D6807
D6808
D6809
D6810
UDZS6R8(B)-TRB
V+5V_EDID2
V+5V_EDID1
V+5V_A
117 SDA_MA
116 SCL_MA
DSCL_2
DSDA_2
DSCL_1
DSDA_1
R6852
TMDS_2[0:7]
TMDS_1[0:7]
TMDS SIGNAL
Differential
signal pair
impedance
100 ohm
31 WE_ROM
151 HOT_P2
150 HOT_P1
+1.8V
+3.3V
IC6801
SII9023CTU-K
HDMI Rx
V+1_8V_HDMI
V+1_8V_D_HDMI
V+3_3V_D
F6802
F6803
R6846
R6848
TP6801
TP6802
TP6803
TP6804
TP6805
TP6806
TP6807
TP6808
TP6809
TP6810
TP6811
TP6812
TP6814
TP6815
TP6816
TP6817
TP6818
TP6819
TP6820
TP6821
GND

	USED	VACANT
C	6801-6890	
CN	6801-6801	
D	6801-6810	6804,
F	6801-6803	
IC	6801-6804	
JA	6801-6802	
Q	6801-6811	6807,
R	6801-6859	6824-6825, 6836,
TP	6801-6830	6813,
X	6801-6801	

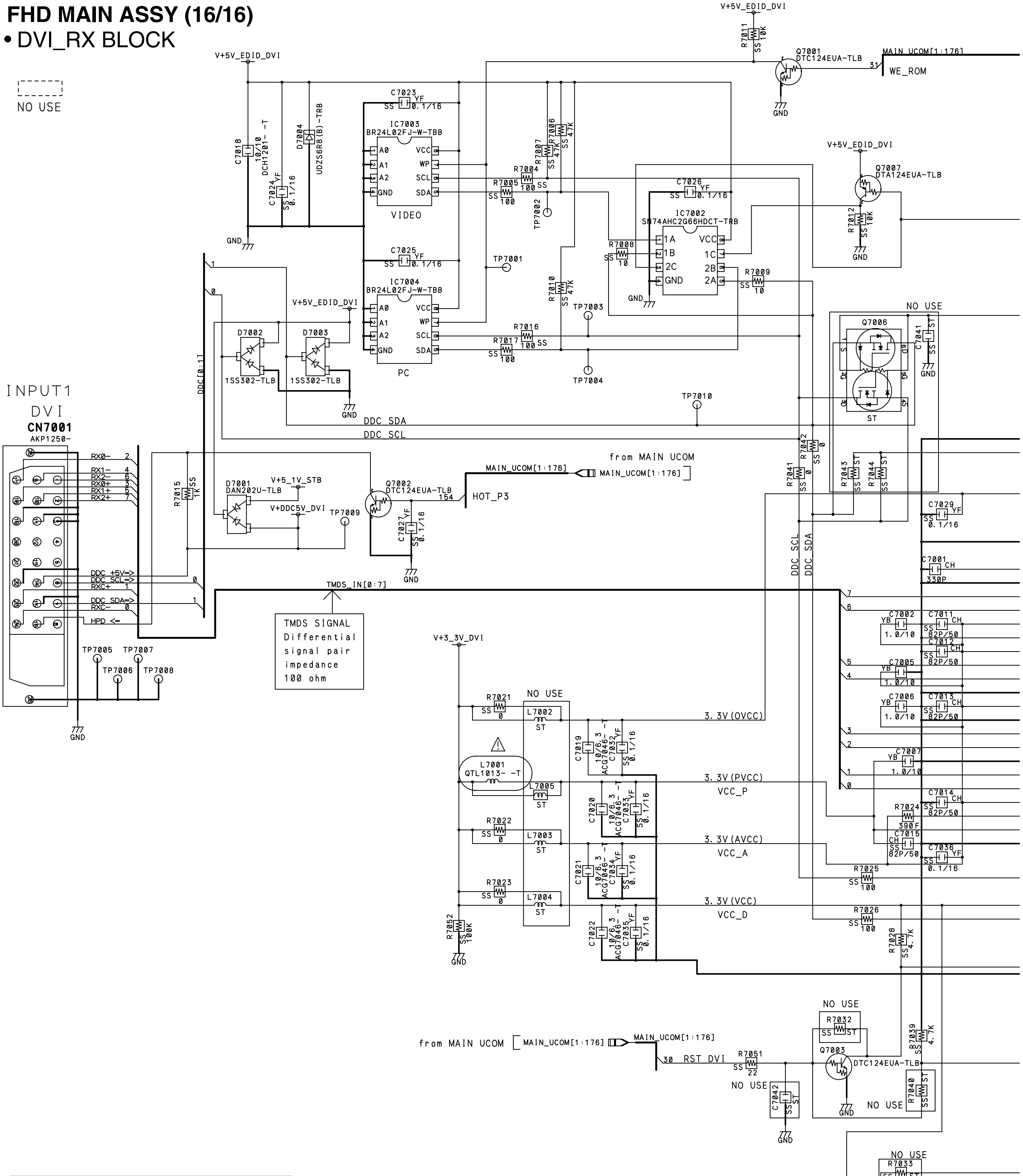


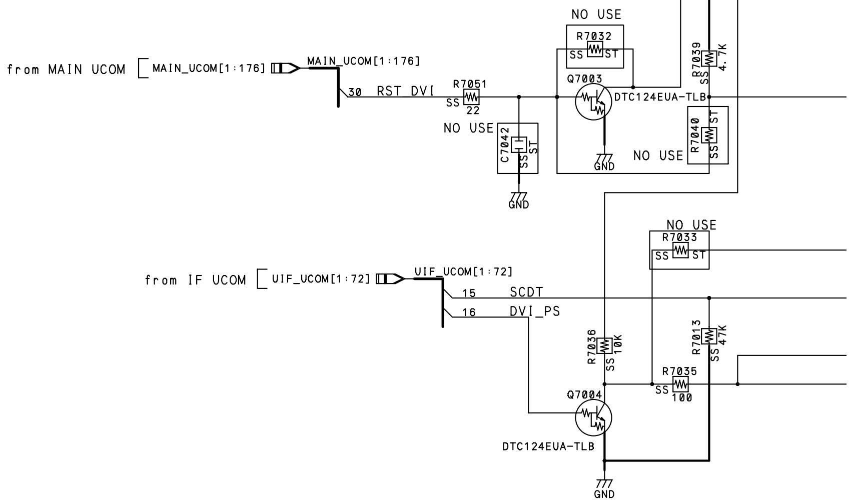
R6821
68
R6853
47
CLK
VD
HD
DE
HDMI_DCLK_I
HDMI_V_I
HDMI_H_I
HDMI_DE_I
HDMI_CB_I[0:7]
HDMI_GY_I[0:7]
HDMI_CR_I[0:7]
to FPGA
BA2_PLK[0:7]
GA2_PLK[0:7]
RA2_PLK[0:7]
R6801
R6802
R6803
BCN1067- -T
C6818
C6822
C6823
C6829
R6820
C6830
C6824
C6825
C6826
C6827
C6828
0.1/16
100P/50
220
NC
IOVCC
IOGND
EVNODD
VSYNC
HSYNC
DE
+1.8V
CVCC18
CGND
C6832
C6831
C6849
C6850
C6851
C6852
C6853
C6854
C6855
C6856
C6879
C6880
ODCK
GND
CGND
CVCC18
NC
AUDPVCC18
AUDPGND
XTALOUT
XTALIN
XTALVCC
REGVCC
RSVDL
RESET#
SCDT
INT
CLK48B
R6839
NO USE
C6868
C6870
C6871
C6872
C6873
C6874
C6875
C6876
C6869
C6877
C6878
R6840
4.7K
R6842
10K
CCG1162- -T
F6801
R6841
100
R6843
22
RST_ASIC
HDMI_INT
MAIN_UCOM[1:176]
from/to MAIN UCOM
from BOARDIF A
AC_MUTE
R6823
D6803
1SS301-TLB
Q6803
DTC124EUA-TLB
V+3_3V_STB
Q6806
DTA124EUA-TLB
MODE
Open:Single board operation
L:Normal operation
SP_MUTE0
20
78
TP6822
TP6826
TP6825
TP6824
TP6823
TP6827
M9
CN6801
AKP1299-
1. A_MUTE_HDMI
2. SDO
3. WS
4. SCK
5. GND
6. MCLK
7. GND
8. SP_MUTE
9. M_MODE
10. SDA_MA5
11. SCL_MA5
from/to FHD PRE AUDIO ASS'Y
R6849
R6850
R6851
R6844
V+3_3V_D_HDMI
IC6804
C6885
R6855
R6856
R6857
R6858
TP6828
TP6829
SDA_MA5
SCL_MA5
TP6830
R6847
R6859
22
R6834
1.5K
X6801
ASS1192- -T
28.322MHZ
R6835
1M
C6801
C6802
12P/50
GND

1.50 FHD MAIN ASSY (16/16)

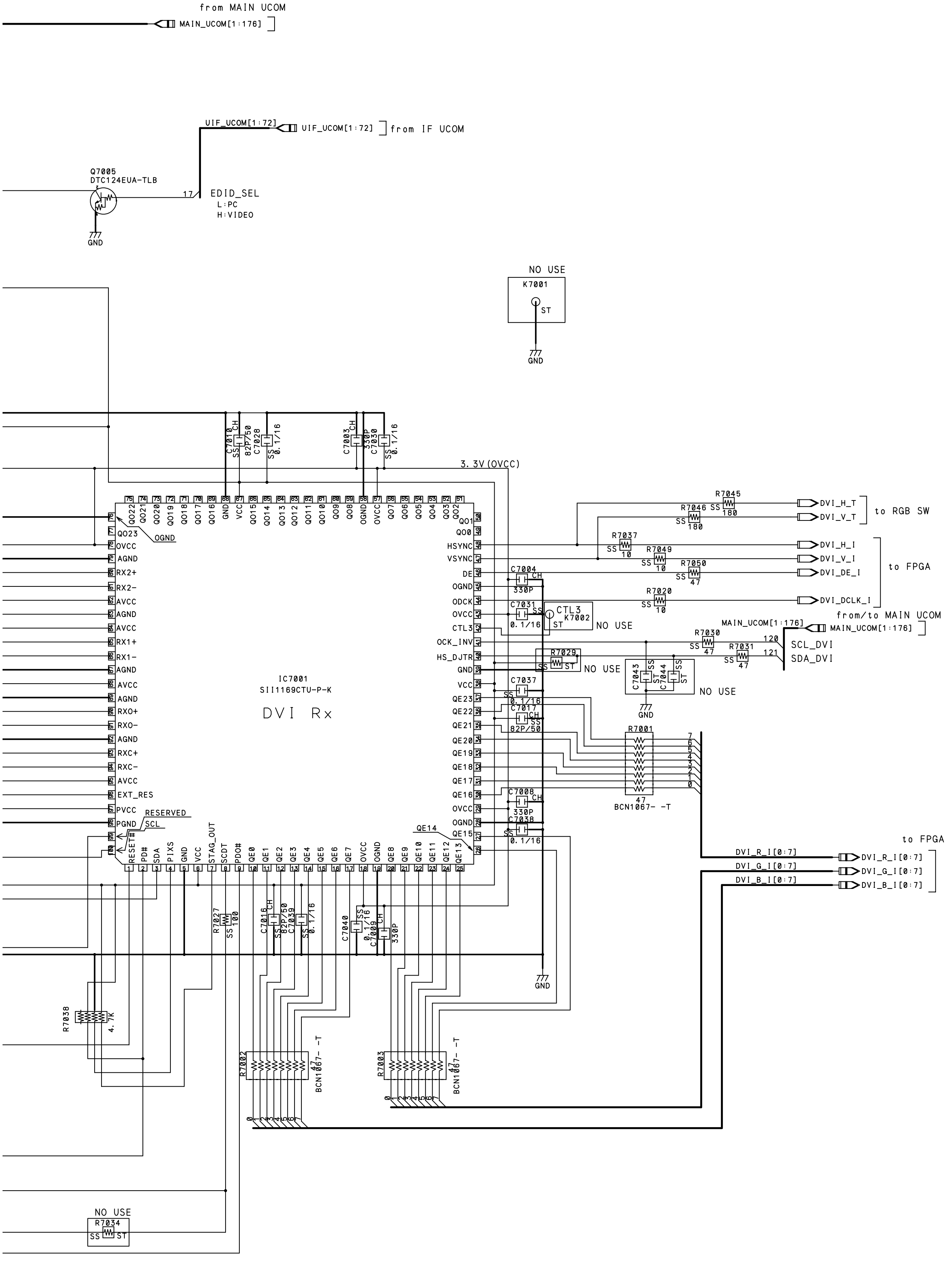
FHD MAIN ASSY (16/16)

- DVI_RX BLOCK

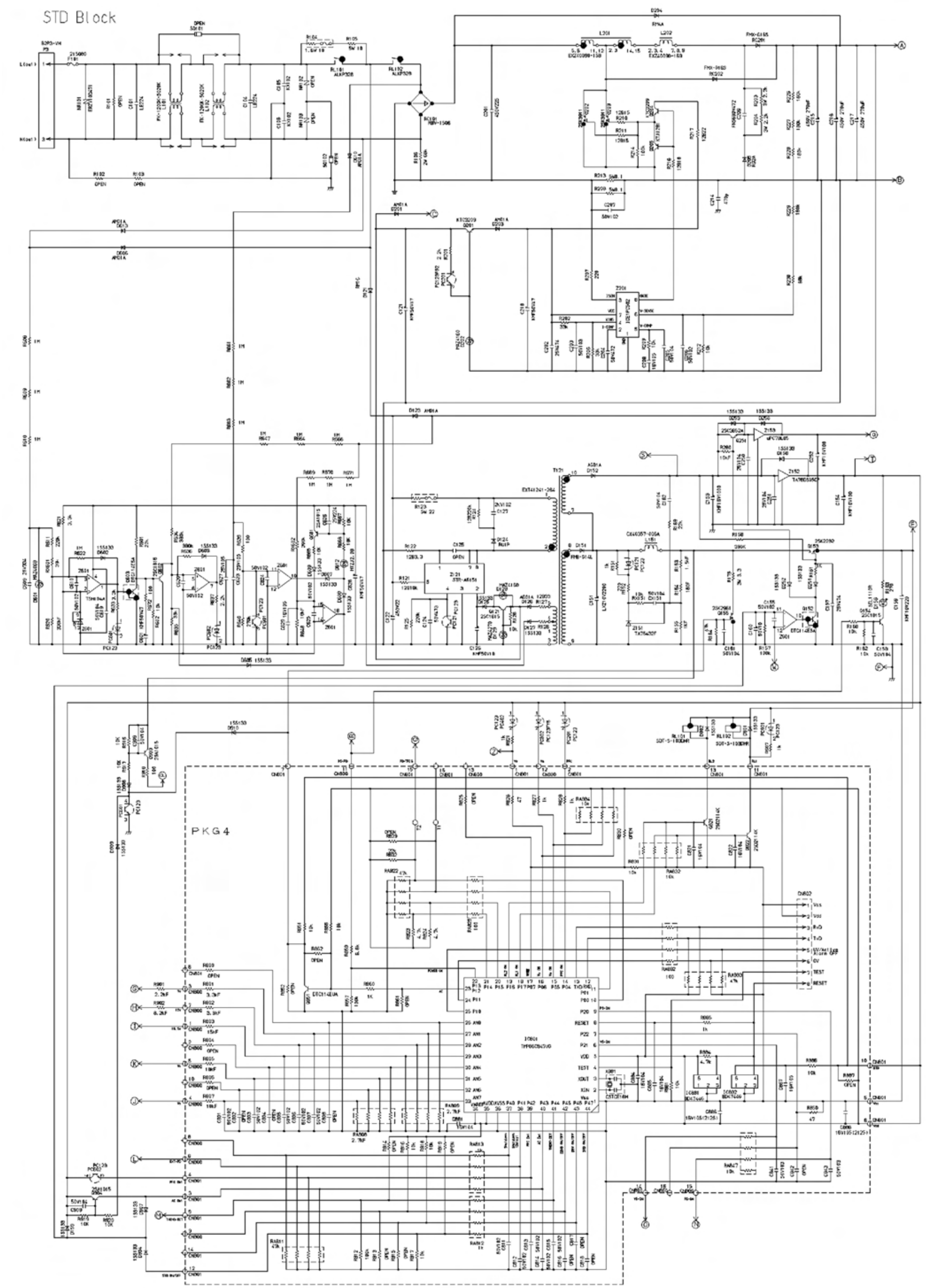

NO USE
V+5V_EDID_DVI
R7011 SS 10K
Q7001 DTC124EUA-TLB
MAIN_UCOM[1:176]
31 WE_ROM
GND
C7023 YF SS 0.1/16
IC7003 BR24L02FJ-W-TBB
A0 A1 A2 GND VCC WP SCL SDA
VIDEO
C7018 10/10 DCH1201- -T
D7004 UDZS6R8(B)-TRB
C7024 YF SS 0.1/16
R7007 SS 47K
R7006 SS 47K
R7004 100 SS
R7005 SS 100
TP7002
C7026 YF SS 0.1/16
IC7002 SN74AHC2G66HDCT-TRB
1A 1B 2C GND VCC 1C 2B 2A
R7008 SS 10
R7009 SS 10
Q7007 DTA124EUA-TLB
R7012 SS 10K
C7025 YF SS 0.1/16
IC7004 BR24L02FJ-W-TBB
PC
TP7001
R7010 SS 47K
TP7003
R7016 100 SS
R7017 SS 100
TP7004
D7002 1SS302-TLB
D7003 1SS302-TLB
DDC[0:1]
INPUT1 DVI
CN7001 AKP1250-
RX0- RX1- RX2- RX0+ RX1+ RX2+
DDC +5V DDC SCL RXC+ DDC SDA RXC- HPD
DDC SDA
DDC SCL
TP7010
NO USE
Q7006
C7041 SS ST
ST
R7042 SS 0
R7041 SS 0
R7043 SS ST
R7044 SS ST
from MAIN UCOM
MAIN_UCOM[1:176]
Q7002 DTC124EUA-TLB
154 HOT_P3
R7015 SS 1K
D7001 DAN202U-TLB
V+5_1V_STB
V+DDC5V_DVI
TP7009
C7027 YF SS 0.1/16
C7029 YF SS 0.1/16
C7001 CH 330P
TMDS_IN[0:7]
TMDS SIGNAL Differential signal pair impedance 100 ohm
TP7005 TP7007 TP7006 TP7008
DDC SCL DDC SDA
C7002 YB 1.0/10
C7011 CH SS 82P/50
C7012 CH SS 82P/50
C7005 YB 1.0/10
C7006 YB 1.0/10
C7013 CH SS 82P/50
C7007 YB 1.0/10
C7014 CH SS 82P/50
R7024 SS 390F
C7015 CH SS 82P/50
C7036 YF SS 0.1/16
V+3_3V_DVI
R7021 SS 0
L7002 ST
L7001 QTL1013- -T
L7005 ST
R7022 SS 0
L7003 ST
R7023 SS 0
L7004 ST
R7052 SS 100K
C7019 C7020 C7021 C7022 10/6.3 ACG7046- -T
C7032 C7033 C7034 C7035 YF SS 0.1/16
3.3V(OVCC)
3.3V(PVCC) VCC_P
3.3V(AVCC) VCC_A
3.3V(VCC) VCC_D
R7025 SS 100
R7026 SS 100
R7028 SS 4.7K
GND

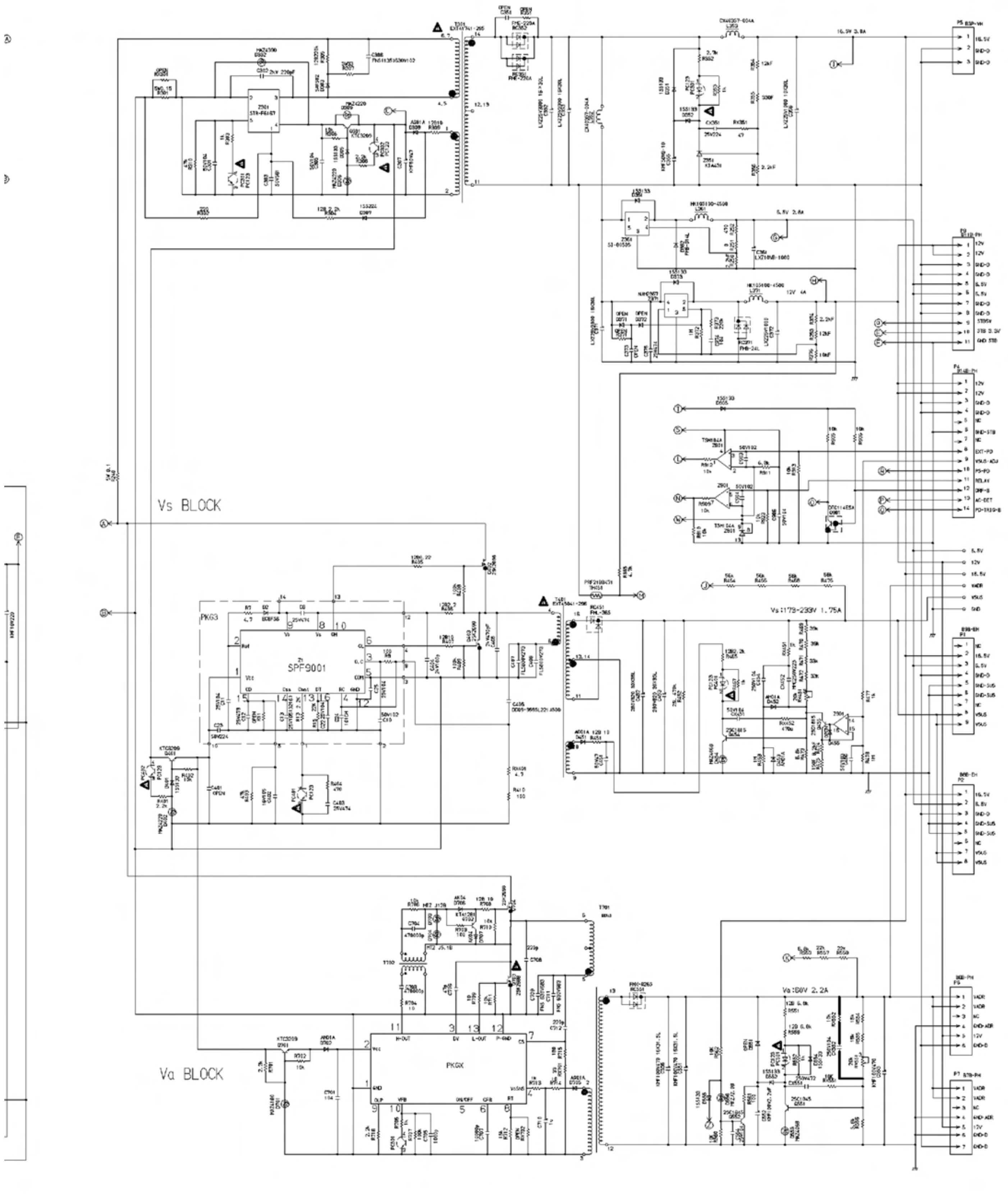

NO USE
R7032 SS ST
R7039 SS 4.7K
from MAIN UCOM
MAIN_UCOM[1:176]
30 RST DVI
R7051 SS 22
Q7003 DTC124EUA-TLB
NO USE
C7042 SS ST
R7040 SS ST
NO USE
R7033 SS ST
from IF UCOM
UIF_UCOM[1:72]
15 SCDT
16 DVI_PS
R7036 SS 10K
R7013 SS 47K
R7035 SS 100
Q7004 DTC124EUA-TLB
GND

	USED	VACANT
C	7001-7044	
CN	7001-7001	
D	7001-7004	
IC	7001-7004	
K	7001-7002	
L	7001-7005	
Q	7001-7007	
R	7001-7052	7014, 7018-7019, 7047-7048,
TP	7001-7010	


from MAIN UCOM
MAIN_UCOM[1:176]
UIF_UCOM[1:72]
UIF_UCOM[1:72]
from IF UCOM
Q7005
DTC124EUA-TLB
GND
17
EDID_SEL
L:PC
H:VIDEO
NO USE
K7001
ST
GND
C7010 SS CH 82P/50
C7028 SS 0.1/16
C7003 CH
C7030 SS 330P
0.1/16
3.3V(OVCC)
R7045 SS 180
R7046 SS 180
DVI_H_T
DVI_V_T
to RGB SW
R7037 SS 10
R7049 SS 10
R7050 SS 47
DVI_H_I
DVI_V_I
DVI_DE_I
DVI_DCLK_I
to FPGA
C7004 CH 330P
R7020 SS 10
C7031 SS 0.1/16
CTL3
K7002
ST
NO USE
from/to MAIN UCOM
MAIN_UCOM[1:176]
R7030 SS 47
R7031 SS 47
120
121
SCL_DVI
SDA_DVI
R7029 SS ST
NO USE
C7043 SS ST
C7044 SS ST
NO USE
GND
C7037 SS 0.1/16
C7017 CH SS 82P/50
R7001
47
BCN1067- -T
C7008 CH 330P
C7038 SS 0.1/16
QE14
IC7001
SII1169CTU-P-K
DVI Rx
Q022 Q021 Q020 Q019 Q018 Q017 Q016 GND VCC Q015 Q014 Q013 Q012 Q011 Q010 Q09 Q08 OGND OVCC Q07 Q06 Q05 Q04 Q03 Q02
Q023 OVCC AGND RX2+ RX2- AVCC AGND AVCC RX1+ RX1- AGND AVCC AGND RX0+ RX0- AGND RXC+ RXC- AVCC EXT_RES PVCC PGND
OGND
RESERVED
SCL
Q01 Q00 HSYNC VSYNC DE OGND ODCK OVCC CTL3 OCK_INV HS_DJTR GND VCC QE23 QE22 QE21 QE20 QE19 QE18 QE17 QE16 OVCC OGND QE15
RESET# PD# SDA PIXS GND VCC STAG_OUT SCDT PDO# QE0 QE1 QE2 QE3 QE4 QE5 QE6 QE7 OVCC OGND QE8 QE9 QE10 QE11 QE12 QE13
to FPGA
DVI_R_I[0:7]
DVI_G_I[0:7]
DVI_B_I[0:7]
R7027 SS 100
C7016 SS CH 82P/50
C7039 SS 0.1/16
C7040 SS 0.1/16
C7009 CH 330P
GND
R7038 4.7K
R7002 47 BCN1067- -T
R7003 47 BCN1067- -T
NO USE
R7034
SS ST

1.51 POWER SUPPLY ASSY


STD Block
PKG4
A
B
C
D
E
F
CN602
Vss
Vdd
RxD
TxD
TEST
RESET

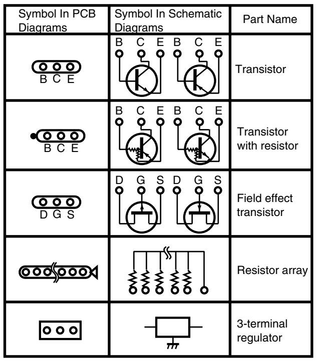

Vs BLOCK
Va BLOCK
SPF9001
PKG3
PKGX
STR-F6167
EXT41741-26S
EXT45041-26S
Vs:179-233V 1.75A
Va:60V 2.2A
16.5V 3.8A
6.5V 2.8A
12V 4A
T701
T301
T451
P5
P6
P4
P1
P2
P3
P7
16.5V
GND-D
12V
6.5V
STBSV
STB 3.3V
GND STB
NC
GND-STB
EXT-PD
VSUS-ADJ
PS-PD
RELAY
DRF-B
AC-DET
PD-TRIG-B
VSUS
GND-SUS
VADR
GND-ADR
GND
H-OUT
DV
L-OUT
P-GND
OLP
VFB
ON/OFF
CFB
Vcc
CD
Css
Cset
DT
FC
Ref
Vb
Vs
OH
OL
COM

2. PCB CONNECTION DIAGRAM

2.1 50FHD ADDRESS A ASSY

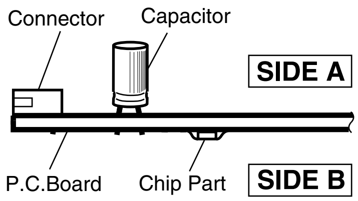
NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.



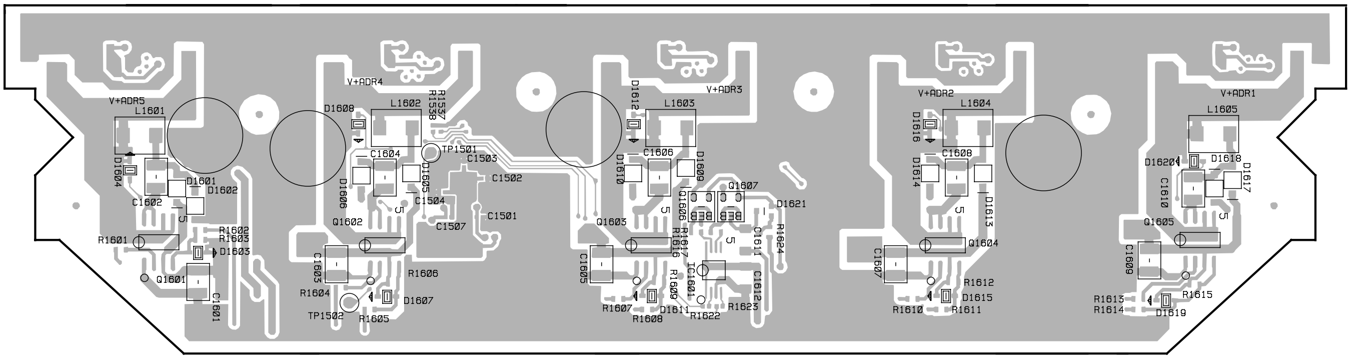
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

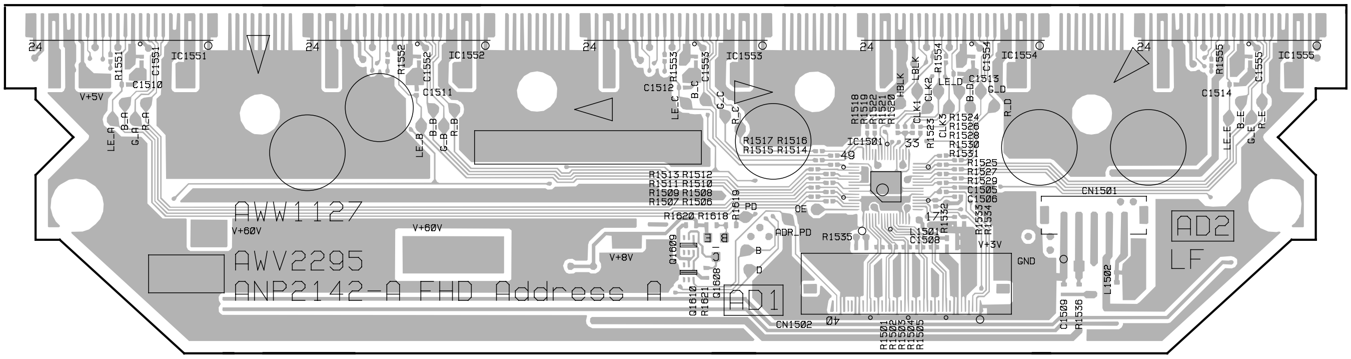
SIDE A

50FHD ADDRESS A ASSY


V+ADR5
L1601
D1604
D1601
D1602
C1602
R1601
R1602
R1603
D1603
Q1601
C1601
V+ADR4
D1600
L1602
R1537
R1538
C1604
TP1501
C1503
C1502
D1606
D1605
C1504
C1501
Q1602
C1507
C1605
R1606
R1604
D1607
TP1502
R1605
D1612
L1603
V+ADR3
C1606
D1610
D1609
Q1607
D1621
Q1603
Q1606
R1616
R1617
C1611
R1624
C1603
IC1601
R1609
C1612
R1607
R1608
D1611
R1622
R1623
V+ADR2
L1604
D1616
D1614
C1608
D1613
Q1604
C1607
R1612
D1615
R1610
R1611
V+ADR1
L1605
D1620
D1618
D1617
C1610
Q1605
C1609
R1613
R1614
R1615
D1619

SIDE B

50FHD ADDRESS A ASSY

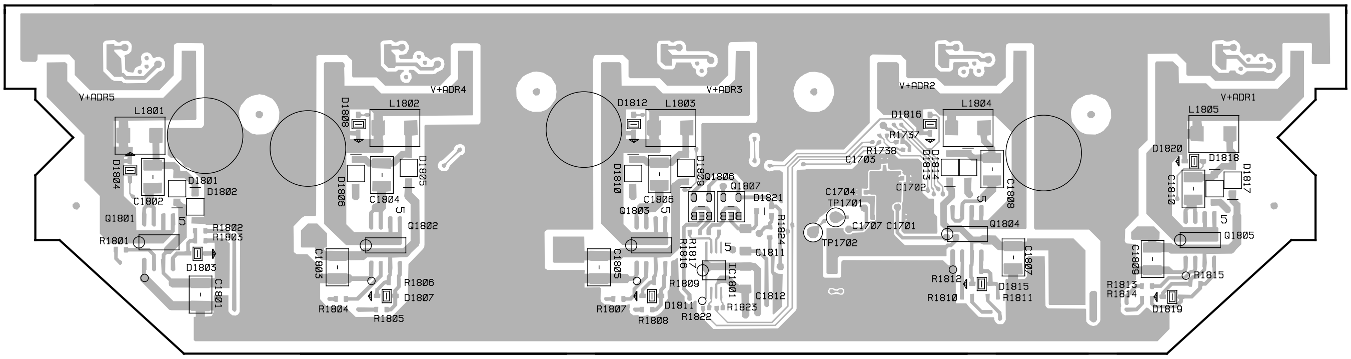

24
R1551
C1551
IC1551
V+5V
C1510
LE_A
B_A
G_A
R_A
R1552
C1552
IC1552
C1511
LE_B
B_B
G_B
R_B
R1553
C1553
IC1553
C1512
LE_C
B_C
G_C
R_C
R1517 R1516
R1515 R1514
R1513 R1512
R1511 R1510
R1509 R1508
R1507 R1506
R1620 R1618
R1619
PD
OE
ADR_PD
B
D
D1609
Q1608
Q1610
R1621
V+8V
AD1
AWW1127
AWV2295
ANP2142-A FHD Address A
V+60V
V+60V
R1518
R1519
R1521
R1522
R1520
HBLK
LBLK
CLK1
CLK2
CLK3
R1554
C1554
IC1554
LE_D
C1513
G_D
B_D
R_D
R1523
R1524
R1526
R1528
R1530
R1531
R1525
R1527
R1529
C1505
C1506
IC1501
33
49
17
R1532
R1533
R1534
R1535
L1501
C1508
V+3V
GND
CN1502
40
R1501
R1502
R1503
R1504
R1505
R1555
C1555
IC1555
C1514
LE_E
B_E
G_E
R_E
CN1501
AD2
LF
L1502
C1509
R1536

(ANP2142A)

2.2 50FHD ADDRESS B ASSY

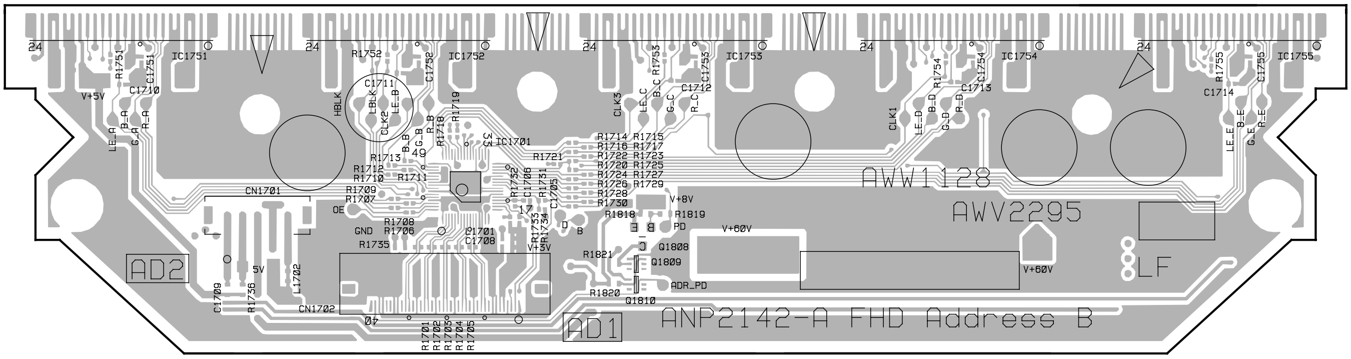
SIDE A

50FHD ADDRESS B ASSY


V+ADR5
L1801
D1804
Q1801
D1802
C1802
Q1801
R1802
R1803
R1801
D1803
C1801
D1808
L1802
V+ADR4
D1806
C1804
D1805
Q1802
C1803
R1806
D1807
R1804
R1805
D1812
L1803
V+ADR3
D1810
D1809
Q1806
C1806
Q1803
Q1807
D1821
C1805
R1816
R1817
IC1801
R1809
R1824
C1811
C1812
R1807
R1808
D1811
R1822
R1823
V+ADR2
D1816
L1804
R1737
R1738
C1703
D1814
D1813
C1704
TP1701
C1702
C1808
C1707
C1701
TP1702
Q1804
R1812
D1815
R1810
R1811
C1807
L1805
V+ADR1
D1820
D1818
D1817
C1810
Q1805
C1809
R1813
R1814
R1815
D1819

SIDE B

50FHD ADDRESS B ASSY

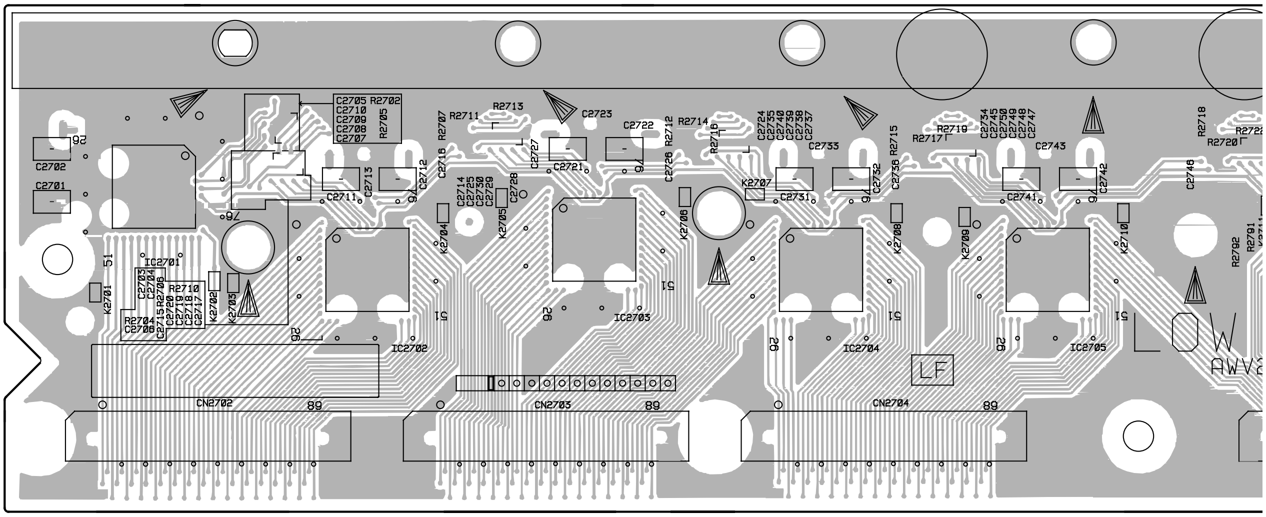

24
IC1751
R1751
C1751
C1710
V+5V
LE_A
B_A
G_A
R_A
R1752
IC1752
C1752
C1711
HBLK
LBLK
CLK2
LE_B
R1719
G_B
B_B
R_B
R1718
49
33
R1713
R1712
R1710
R1711
R1709
R1707
CN1701
OE
GND
R1708
R1706
R1735
IC1701
R1721
R1732
C1706
R1731
C1705
R1714 R1715
R1716 R1717
R1722 R1723
R1720 R1725
R1724 R1727
R1726 R1729
R1728
R1730
CLK3
LE_C
B_C
R1753
G_C
C1753
R_C
C1712
IC1753
CLK1
LE_D
B_D
G_D
R_D
R1754
C1754
C1713
IC1754
R1755
C1755
IC1755
C1714
LE_E
B_E
G_E
R_E
AWW1128
AWV2295
V+8V
R1819
PD
R1818
V+60V
R1821
Q1808
Q1809
ADR_PD
R1820
Q1810
C1701
C1708
R1733
R1734
17
AD2
5V
C1709
R1736
L1702
CN1702
R1701
R1702
R1703
R1704
R1705
AD1
LF
V+60V
ANP2142-A FHD Address B

(ANP2142A)

2.3 50 SCAN A ASSY

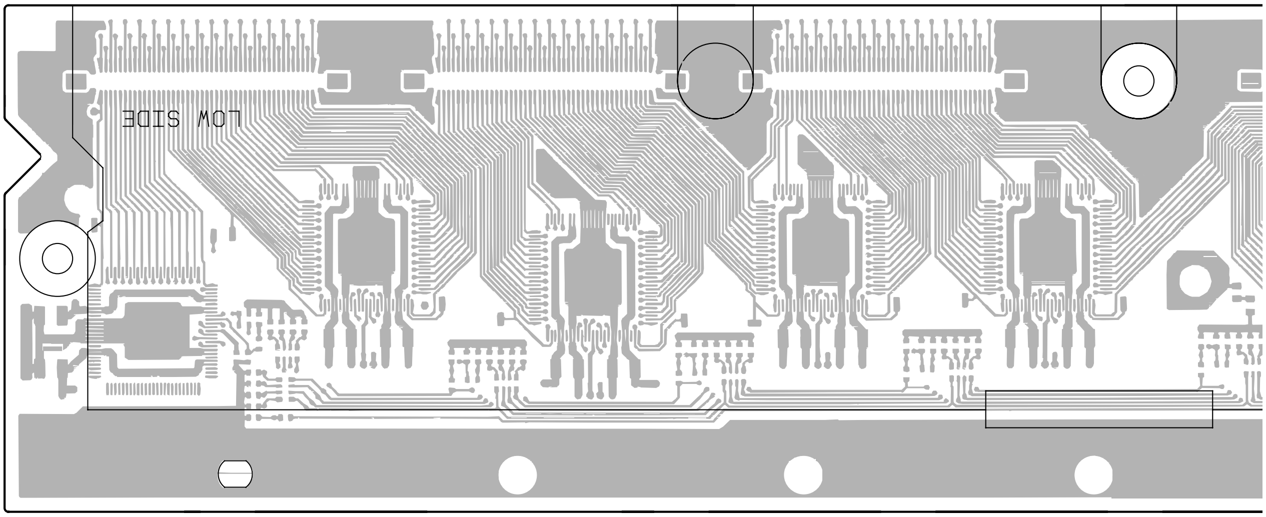
FHD SCAN A ASSY

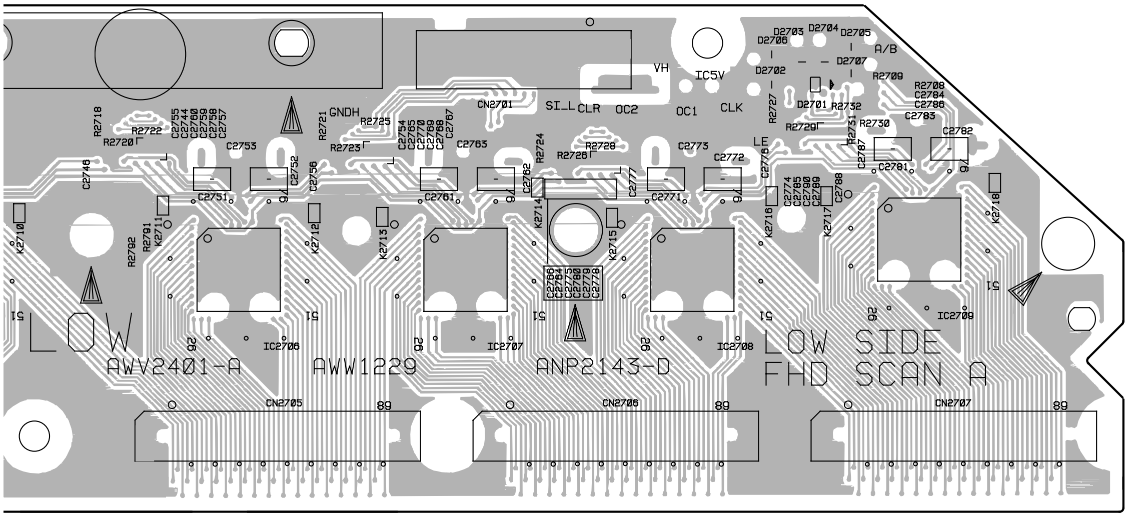
SIDE A

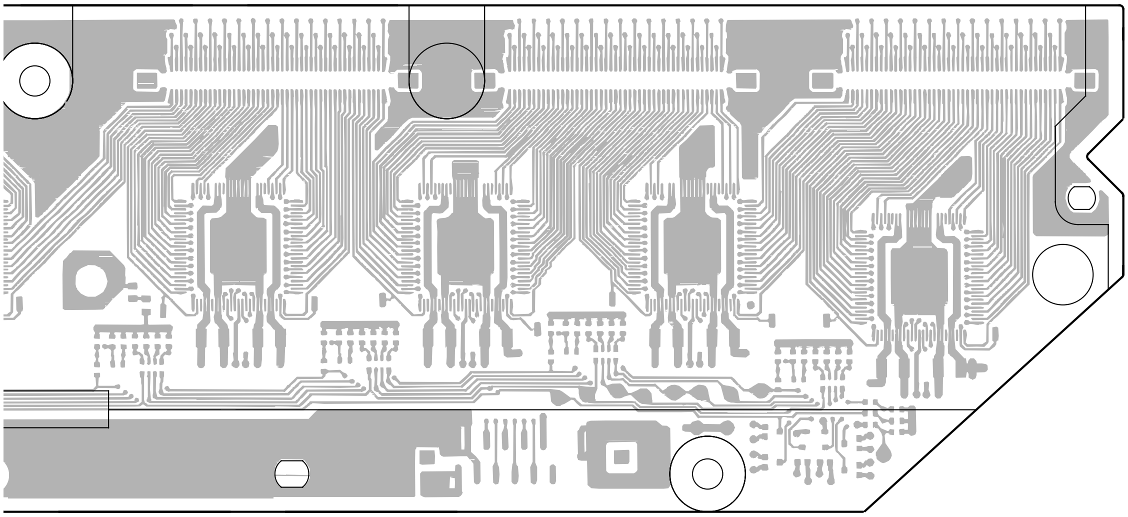

C2705 R2702
C2710
C2709
C2708
C2707
R2705
R2713
R2711
R2707
C2723
C2722
R2714
R2712
R2716
C2724
C2735
C2740
C2739
C2738
C2737
C2733
R2715
R2719
R2717
C2734
C2745
C2750
C2749
C2748
C2747
C2743
R2718
R2722
R2720
C2702
C2701
26
76
C2711
C2713
C2712
C2716
C2714
C2725
C2730
C2729
C2728
C2727
C2721
C2726
K2707
C2731
C2732
C2736
C2741
C2742
C2746
K2704
K2705
K2706
K2708
K2709
K2710
R2792
R2791
51
IC2701
K2701
C2703
C2704
R2706
R2710
C2720
C2719
C2718
C2717
R2704
C2706
C2715
K2702
K2703
IC2702
IC2703
IC2704
IC2705
LF
LOW
AWV2
CN2702
CN2703
CN2704
89

FHD SCAN A ASSY

SIDE B




D2703 D2704 D2705
D2706
D2707
A/B
VH
IC5V
D2702
R2709
R2708
C2784
C2786
C2783
D2701 R2732
CN2701
SI_L CLR OC2
OC1
CLK
R2727
R2729
R2731 R2730
C2782
R2718
R2722
R2720
C2755
C2744
C2760
C2759
C2758
C2757
GNDH
R2721
R2725
R2723
C2754
C2765
C2770
C2769
C2768
C2767
C2753
C2763
R2724
R2728
R2726
C2773
C2772
C2776
C2787
C2781
C2746
C2751
C2752
C2750
C2761
C2762
C2777
C2771
C2774
C2785
C2790
C2789
C2788
K2710
R2791
R2792
K2711
K2712
K2713
K2714
K2715
K2716
K2717
K2718
C2766
C2764
C2775
C2780
C2779
C2778
51
26
IC2706
IC2707
IC2708
IC2709
LOW
AWV2401-A
AWW1229
ANP2143-D
LOW SIDE
FHD SCAN A
CN2705
CN2706
CN2707
89

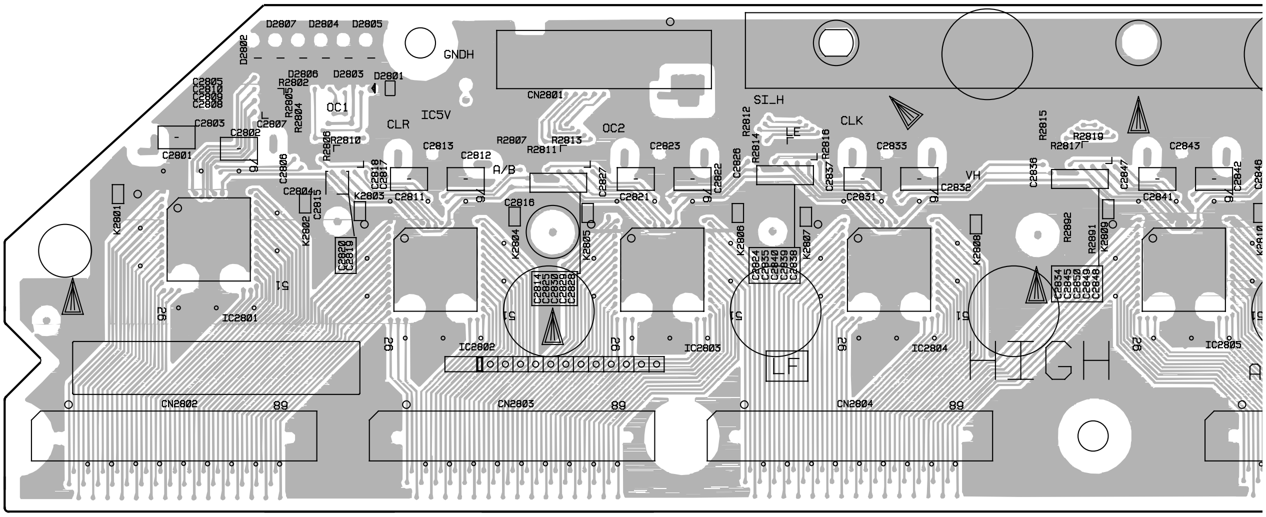


(ANP2143D)

2.4 50 SCAN B ASSY

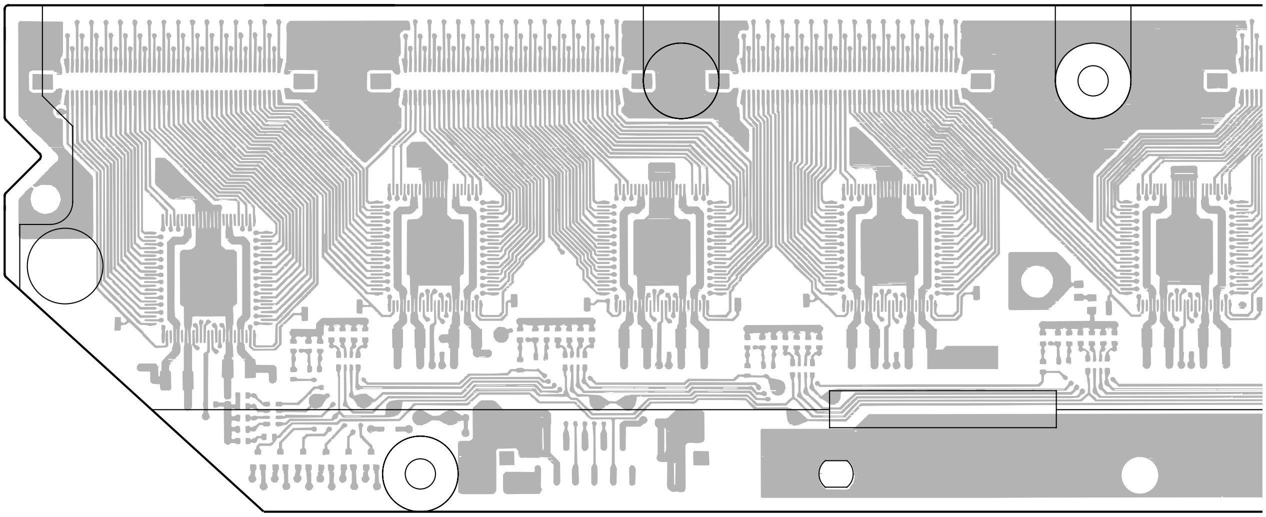
FHD SCAN B ASSY

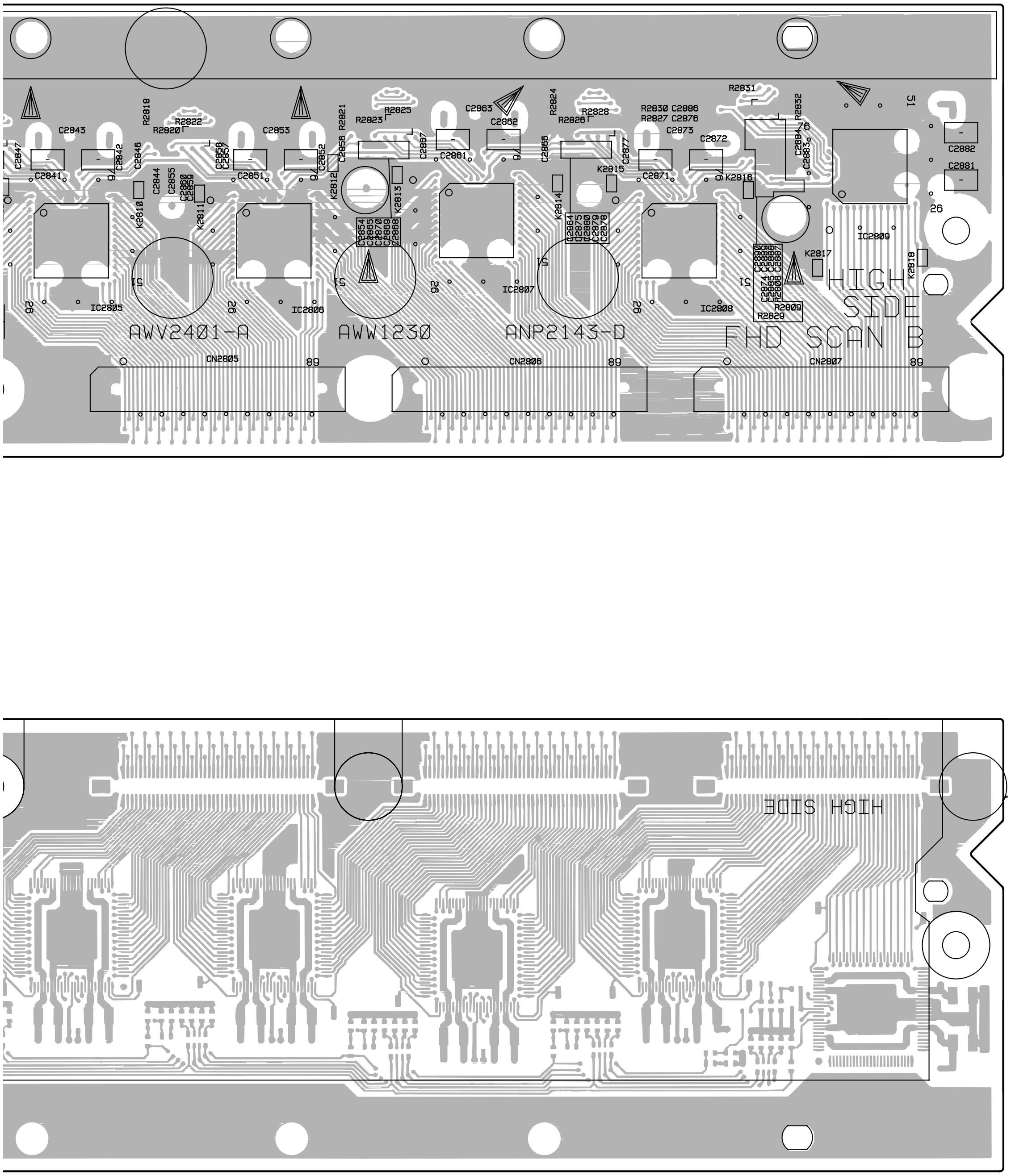
SIDE A


D2807
D2804
D2805
D2802
GNDH
CN2801
D2806
D2803
D2801
R2802
C2805
C2808
R2805
R2804
OC1
C2803
C2807
C2802
C2801
R2806
R2810
CLR
IC5V
C2813
C2812
R2807
R2811
R2813
OC2
C2823
SI_H
R2812
R2814
LE
R2816
CLK
C2833
R2815
R2817
R2819
C2843
C2806
C2804
C2815
K2803
C2810
C2817
C2811
A/B
C2816
C2827
C2821
C2822
C2826
C2837
C2831
VH
C2832
C2836
C2847
C2841
C2842
C2846
K2801
K2802
K2804
K2805
K2806
K2807
K2808
R2802
R2801
K2809
K2810
C2820
C2819
C2814
C2825
C2824
C2835
C2834
C2845
51
26
IC2801
IC2802
IC2803
IC2804
IC2805
LF
HIGH
CN2802
CN2803
CN2804
68

FHD SCAN B ASSY

SIDE B



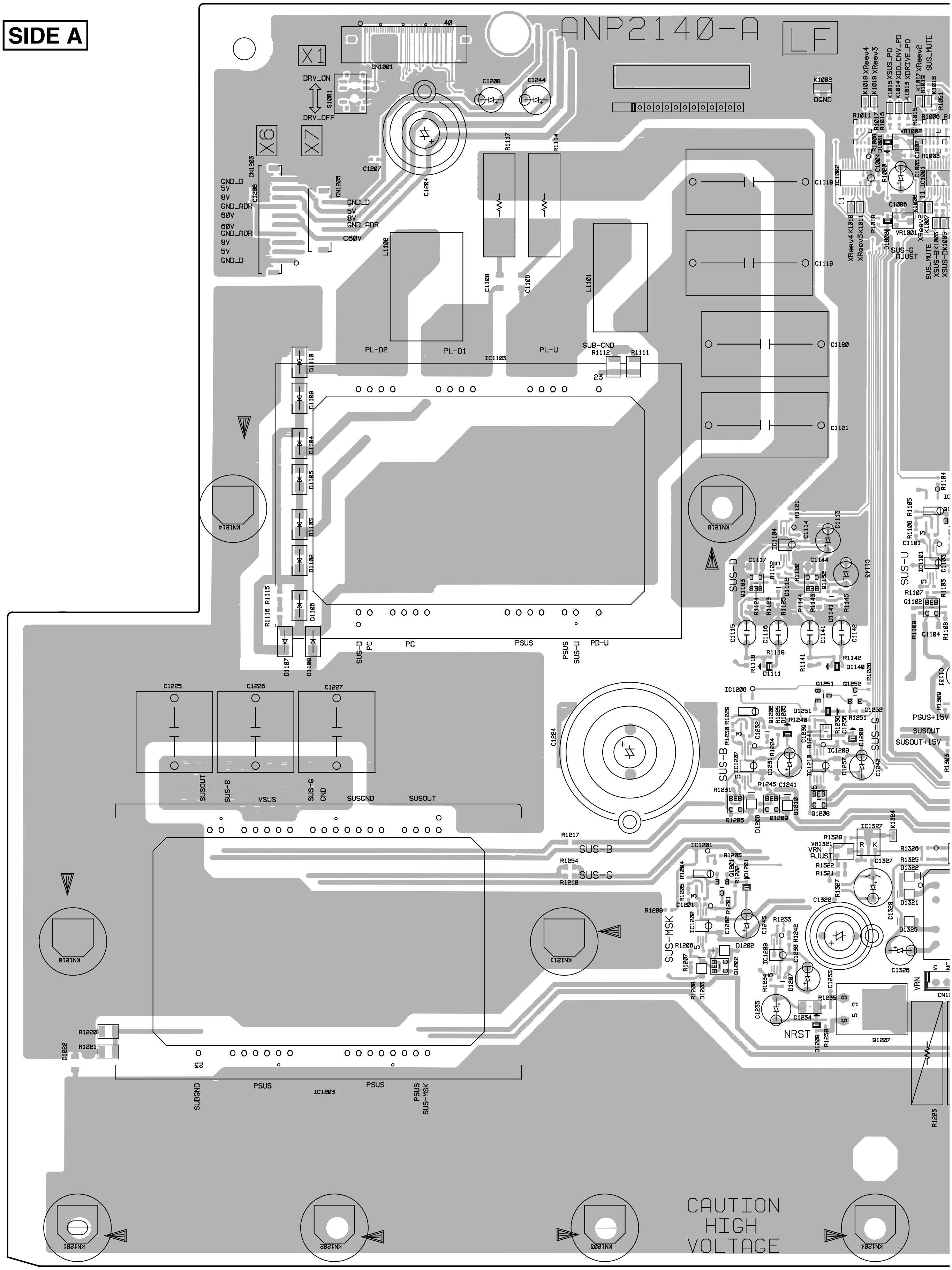

AWV2401-A
AWW1230
ANP2143-D
HIGH SIDE
FHD SCAN B
CN2805
CN2806
CN2807
IC2805
IC2806
IC2807
IC2808
IC2809
R2031
R2032
C2882
C2881
K2817
K2818
R2029
R2009
HIGH SIDE

(ANP2143D)

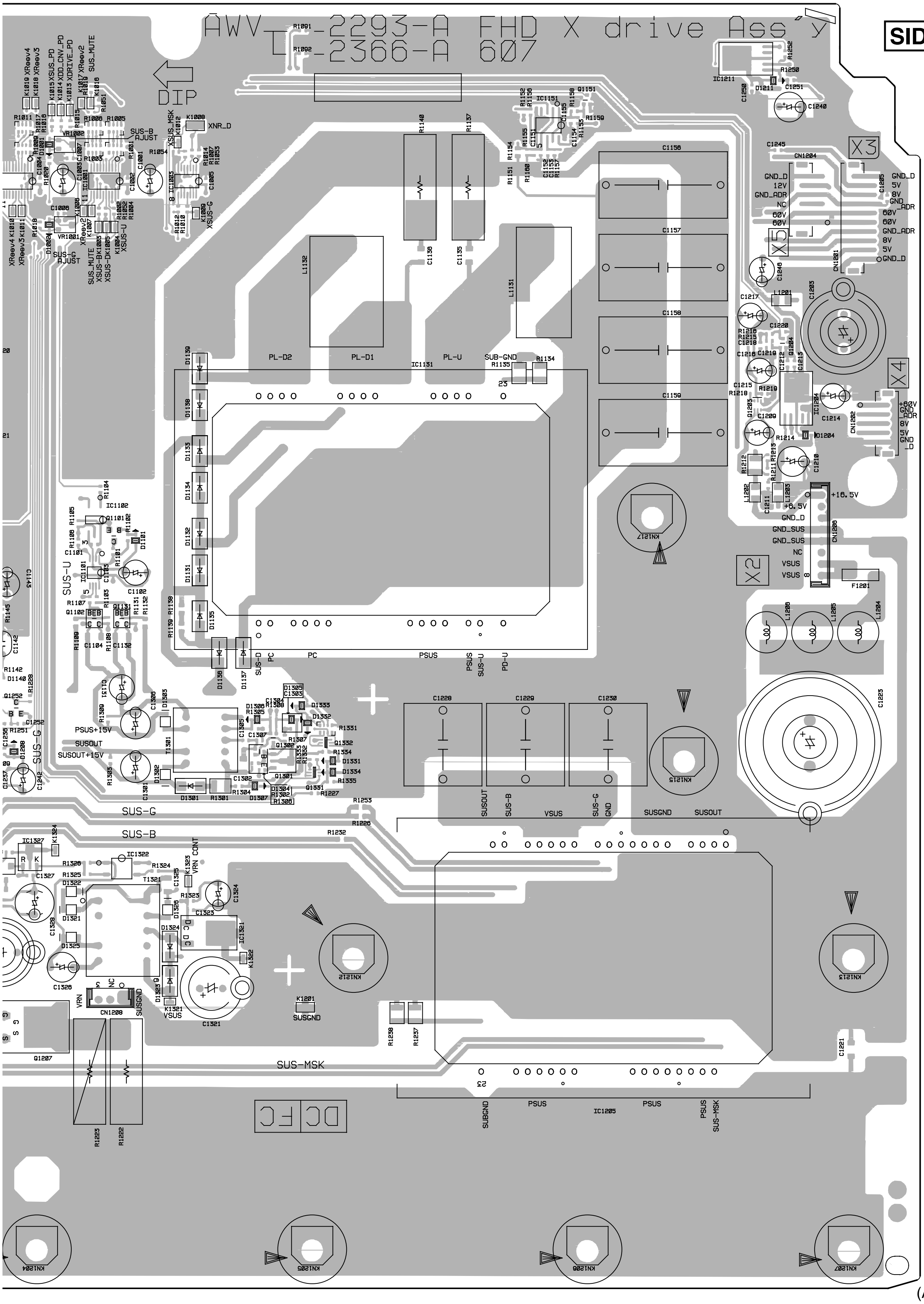
2.5 50FHD X DRIVE ASSY

50FHD X DRIVE ASSY

SIDE A


ANP2140-A
LF
X1
X6
X7
CN1001
40
S1001
DRV_ON
DRV_OFF
CN1203
CN1205
GND_D
5V
8V
GND_ADR
60V
GND_ADR
8V
5V
GND_D
C1208
C1244
C1207
C1204
R1117
R1114
L1102
L1101
C1108
C1106
C1118
C1119
C1120
C1121
K1002
DGND
IC1002
VR1002
VR1001
SUS-G AJUST
SUS_MUTE
XSUS-BK1005
XSUS-DK1005
PL-D2
PL-D1
PL-U
SUB-GND
R1112
R1111
IC1103
D1110
D1109
D1104
D1105
D1103
D1102
D1106
D1107
D1108
R1116
R1115
SUS-D
PC
PSUS
SUS-U
PD-U
KN1214
KN1216
IC1104
C1113
C1114
C1117
C1144
C1145
C1115
C1116
C1141
C1142
R1119
D1111
R1142
D1140
SUS-U
Q1102
C1101
C1104
IC1101
C1225
C1226
C1227
SUSOUT
SUS-B
VSUS
SUS-G
GND
SUSGND
C1224
IC1206
Q1251
Q1252
C1252
D1251
R1240
R1251
IC1207
IC1209
IC1210
SUS-B
SUS-G
PSUS+15V
SUSOUT
SUSOUT+15V
R1231
Q1205
Q1209
Q1208
R1217
SUS-B
R1254
SUS-G
R1210
IC1201
R1203
IC1327
R1328
VR1321
VRN AJUST
R1326
R1325
D1322
D1321
D1325
C1327
C1322
C1326
R1209
SUS-MSK
IC1202
C1202
C1243
D1202
R1233
C1234
C1235
R1235
NRST
Q1207
D1209
VRN
KN1210
KN1211
R1220
R1221
C1222
23
SUBGND
PSUS
IC1203
PSUS
SUS-MSK
R1223
CAUTION
HIGH
VOLTAGE
KN1201
KN1202
KN1203
KN1204

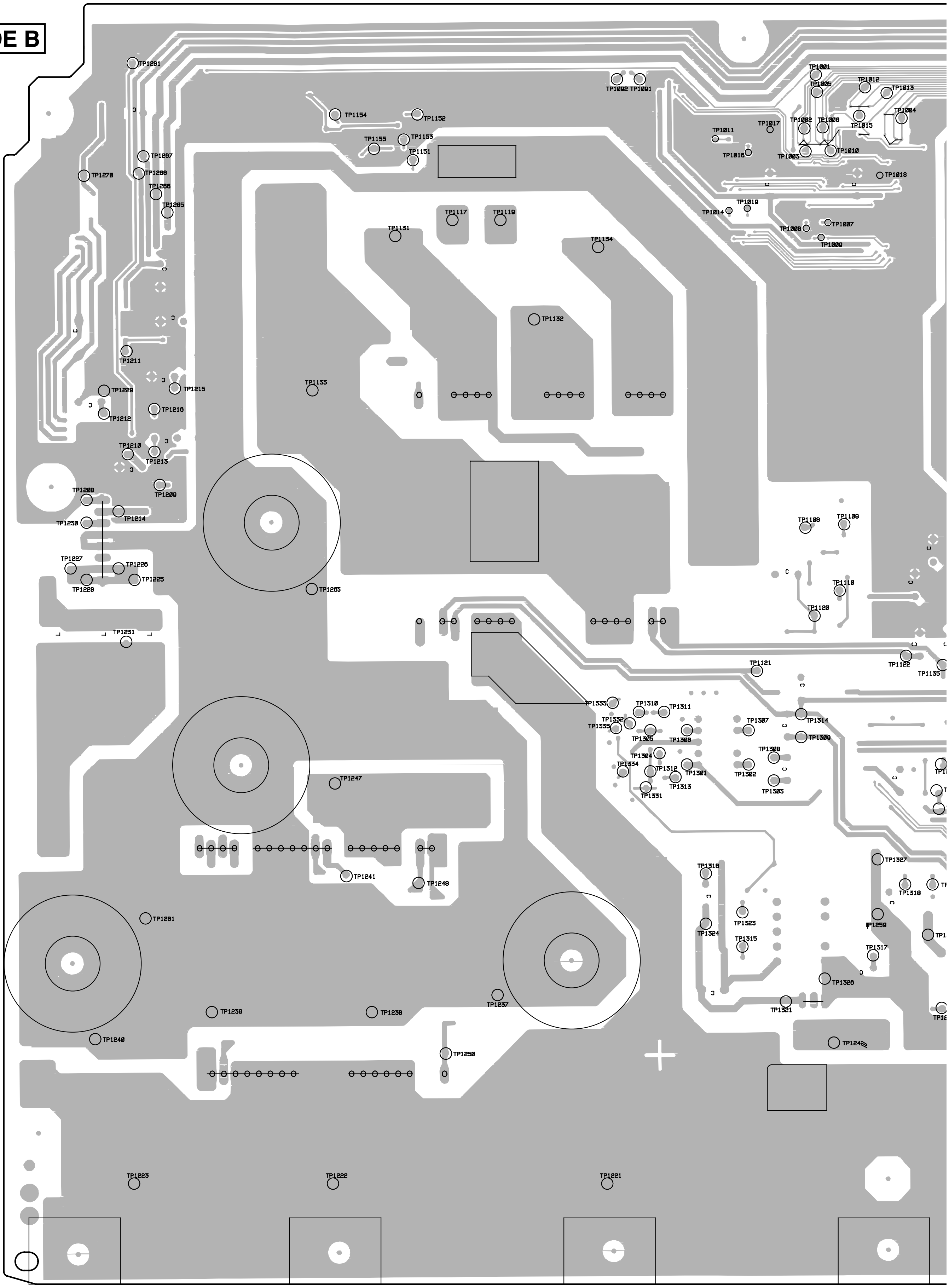
SIDE A


AWV-2293-A FHD X drive Ass'y
LF-2366-A 607
DIP
XNR_D
SUS-B AJUST
SUS-G AJUST
X3
X4
X5
X2
DC FC
SUS-U
SUS-G
SUS-B
SUS-MSK
PSUS+15V
SUSOUT
SUSOUT+15V
PL-D2
PL-D1
PL-U
SUB-GND
IC1131
IC1205
SUSOUT
SUS-B
VSUS
SUS-G
GND
SUSGND
SUBGND
PSUS
PSUS
SUS-MSK
CN1201
CN1202
CN1206
CN1208
GND_D
12V
GND_ADR
NC
60V
5V
8V
+60V
+16.5V
GND_SUS
VSUS
C1156
C1157
C1158
C1159
C1228
C1229
C1230
C1223
C1221
R1223
R1222
KN1204
KN1205
KN1206
KN1207
KN1212
KN1213
KN1215
KN1217

(ANP2140A)

50FHD X DRIVE ASSY

SIDE B


A
B
C
D
E
F
TP1201
TP1002
TP1001
TP1005
TP1012
TP1013
TP1004
TP1154
TP1152
TP1155
TP1153
TP1151
TP1011
TP1017
TP1002
TP1006
TP1015
TP1016
TP1003
TP1010
TP1018
TP1267
TP1270
TP1268
TP1266
TP1265
TP1117
TP1119
TP1131
TP1134
TP1019
TP1014
TP1008
TP1007
TP1009
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TP1133
TP1212
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TP1109
TP1227
TP1226
TP1228
TP1225
TP1263
TP1110
TP1120
TP1231
TP1121
TP1122
TP1135
TP1333
TP1310
TP1311
TP1332
TP1335
TP1307
TP1314
TP1305
TP1306
TP1309
TP1304
TP1308
TP1334
TP1312
TP1301
TP1302
TP1313
TP1303
TP1331
TP1247
TP1327
TP1316
TP1241
TP1248
TP1318
TP1261
TP1323
TP1259
TP1324
TP1315
TP1317
TP1320
TP1237
TP1239
TP1238
TP1321
TP1240
TP1250
TP1249
TP1223
TP1222
TP1221

SIDE B

A

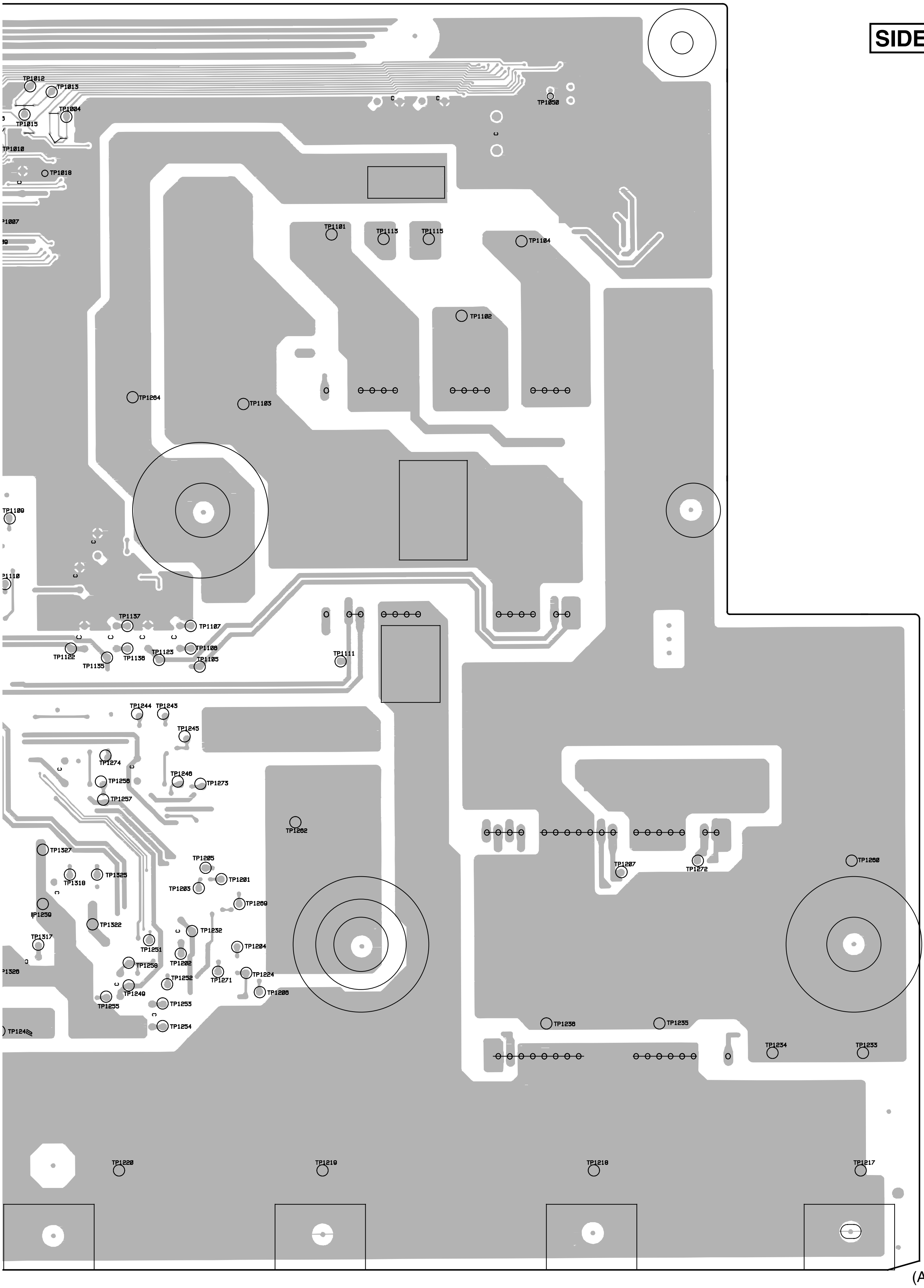
B

C

D

E

F

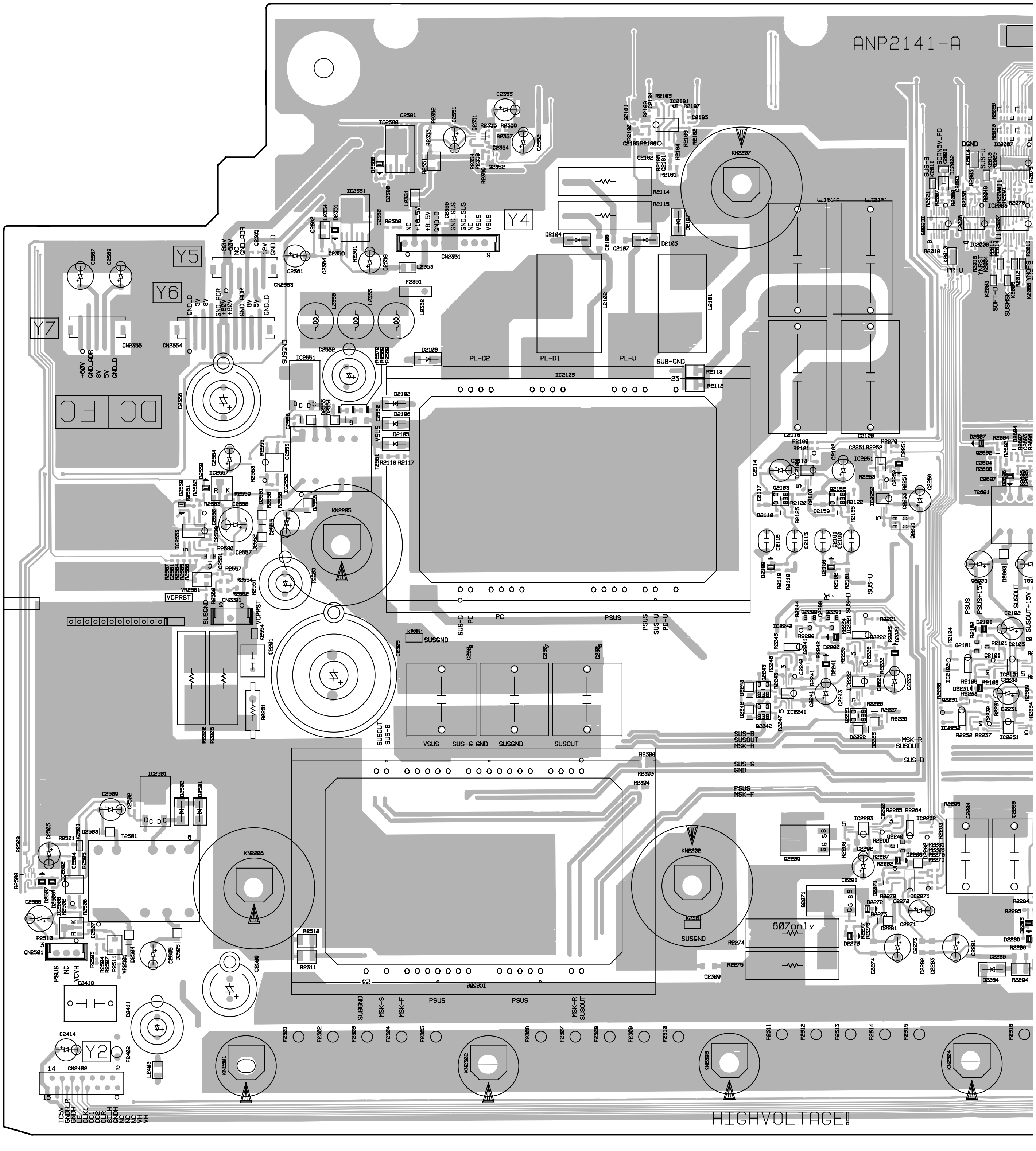

TP1012
TP1013
TP1004
TP1015
TP1010
TP1018
TP1007
TP1050
TP1101
TP1113
TP1115
TP1104
TP1102
TP1264
TP1103
TP1109
TP1110
TP1137
TP1107
TP1122
TP1135
TP1136
TP1123
TP1106
TP1105
TP1111
TP1244
TP1243
TP1245
TP1274
TP1246
TP1273
TP1256
TP1257
TP1262
TP1327
TP1205
TP1318
TP1325
TP1201
TP1203
TP1259
TP1269
TP1322
TP1232
TP1317
TP1204
TP1251
TP1258
TP1202
TP1224
TP1252
TP1271
TP1249
TP1206
TP1255
TP1253
TP1254
TP1248
TP1207
TP1272
TP1260
TP1238
TP1235
TP1234
TP1233
TP1220
TP1219
TP1218
TP1217

(ANP2140A)

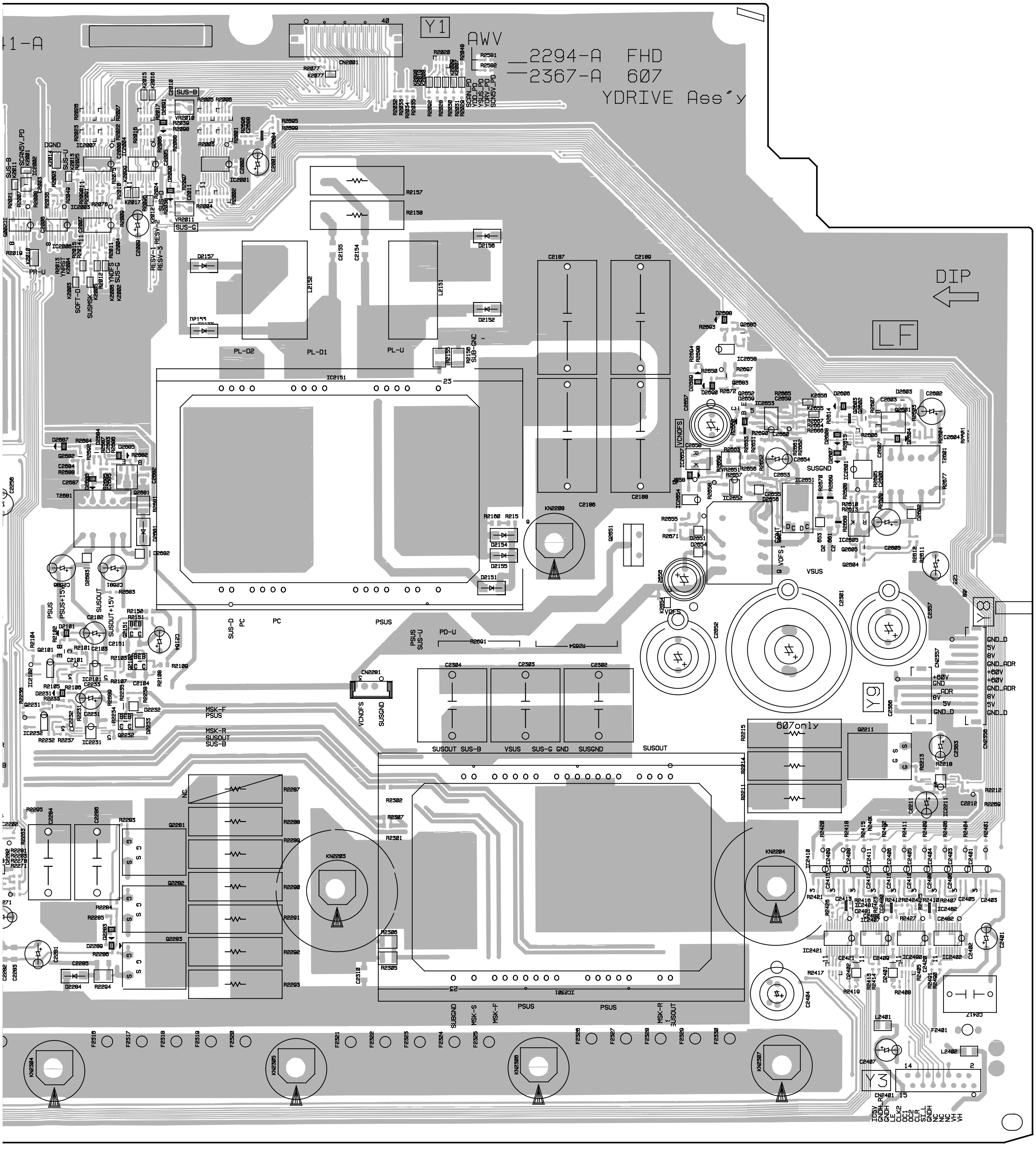
2.6 50FHD Y DRIVE ASSY

50FHD Y DRIVE ASSY

SIDE A


ANP2141-A
Y4
Y5
Y6
Y7
Y2
DC
FC
KN2207
KN2205
KN2206
KN2202
KN2301
KN2302
KN2303
KN2304
IC2103
IC2302
PL-D2
PL-D1
PL-U
SUB-GND
VSUS
SUS-G GND
SUSGND
SUSOUT
PSUS
SUSOUT
SUS-B
SUS-G
GND
MSK-R
MSK-F
MSK-S
SUBGND
VCPRST
607only
HIGHVOLTAGE!

SIDE A



41-A
Y1
AWV
2294-A FHD
2367-A 607
YDRIVE Ass'y
DIP
LF
SUS-B
SUS-G
PL-D2
PL-D1
PL-U
IC2151
VCNOFS
VOFS
VSUS
SUSGND
PSUS
PC
SUS-D
PD-U
CN2201
SUSOUT
SUS-B
VSUS
SUS-G GND
SUSGND
607only
Y8
Y9
Y3
CN2357
GND_D
5V
8V
GND_ADR
+60V
MSK-F
MSK-R
SUSOUT
SUBGND
MSK-S
KN2203
KN2204
KN2304
KN2305
KN2306
KN2307
IC2301
CN2401

(ANP2141A)

A

FHD Y DRIVE ASSY

SIDE B

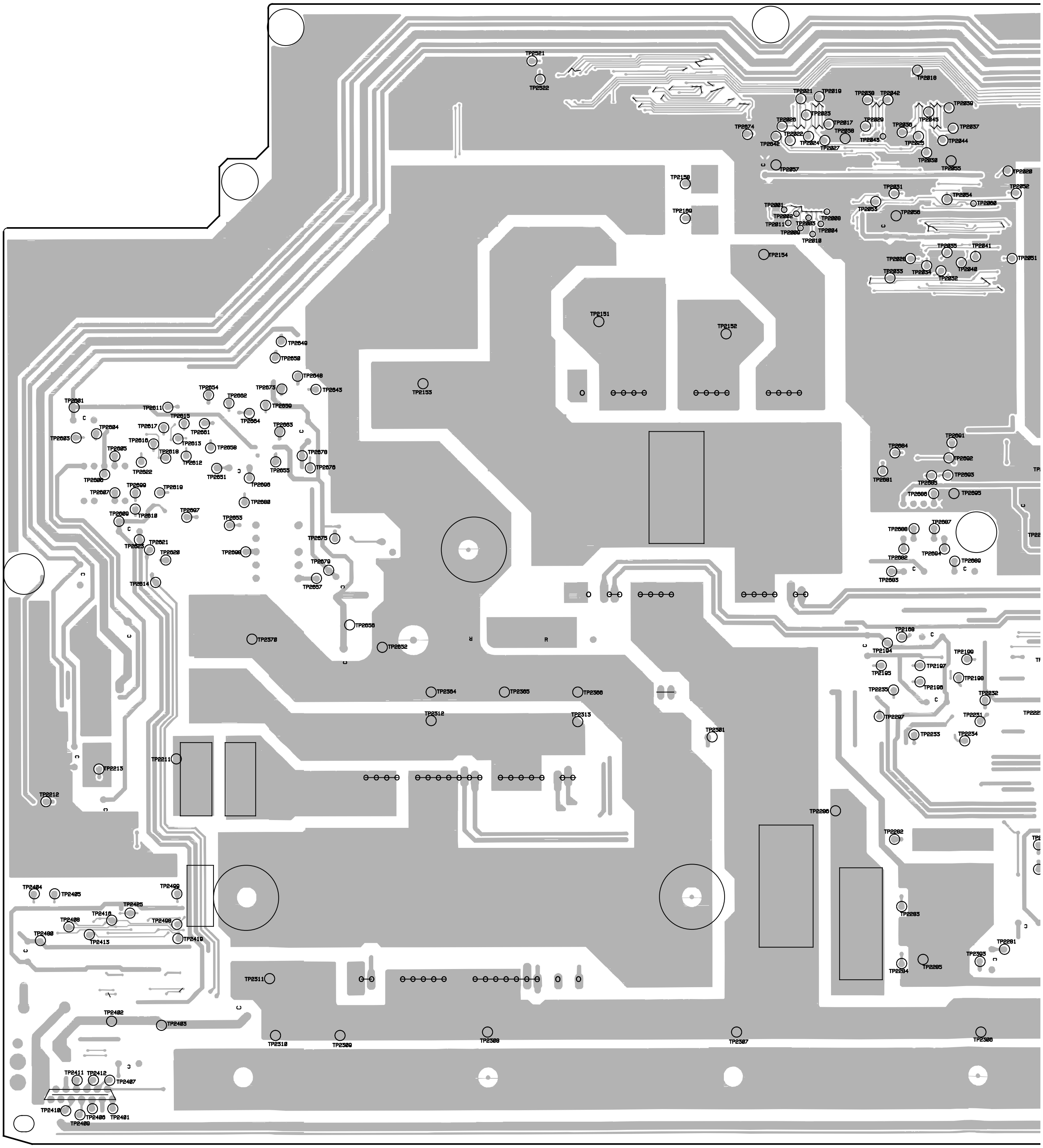
B

C

D

E

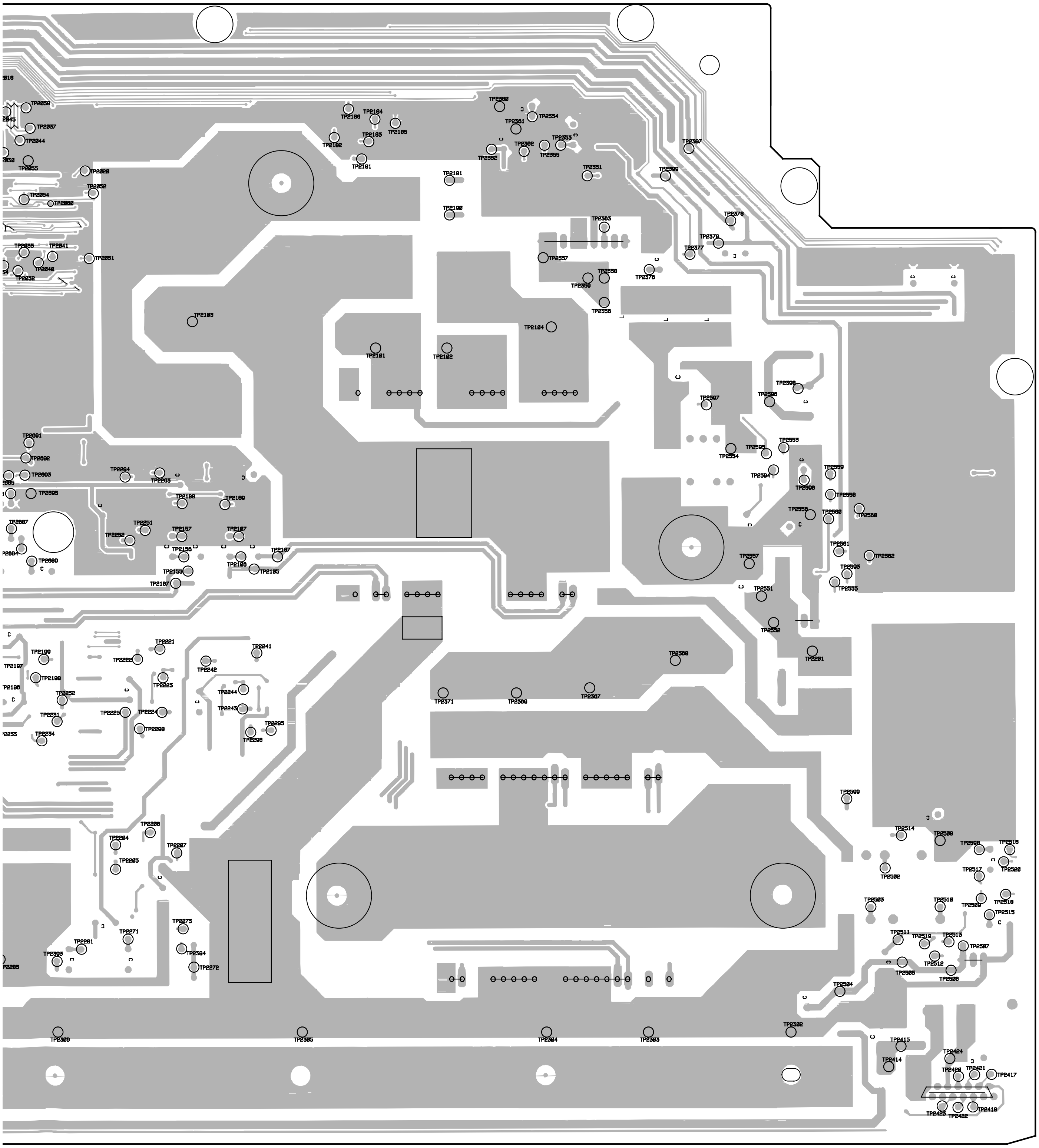
F


TP2521
TP2522
TP2151
TP2152
TP2153
TP2154
TP2370
TP2304
TP2305
TP2306
TP2312
TP2313
TP2301
TP2311
TP2310
TP2309
TP2308
TP2307
TP2306
TP2211
TP2213
TP2212
TP2401
TP2402
TP2403

A

SIDE B

B



C

D

E

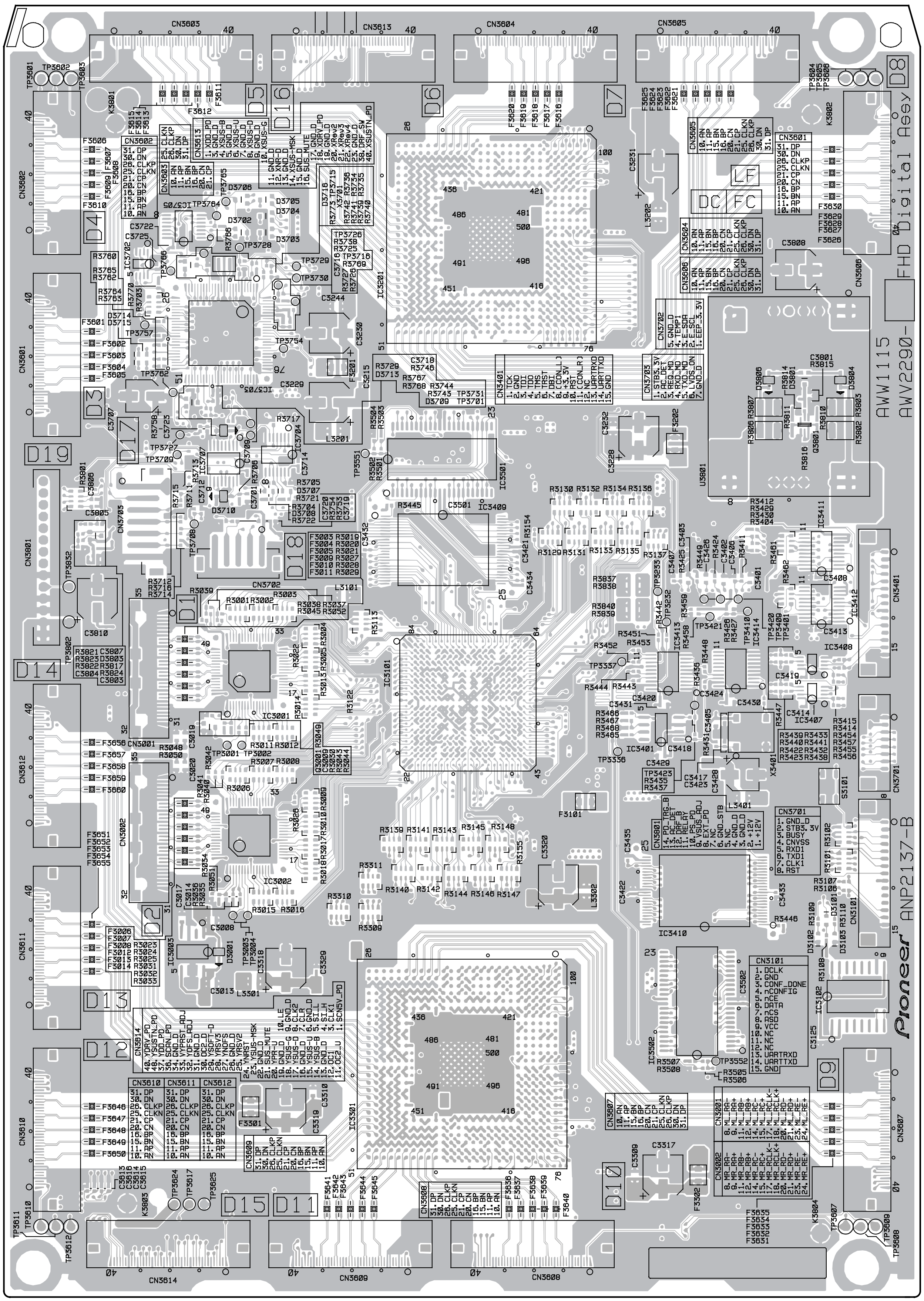
F

(ANP2141A)

2.7 FHD DIGITAL ASSY

FHD DIGITAL ASSY

SIDE A

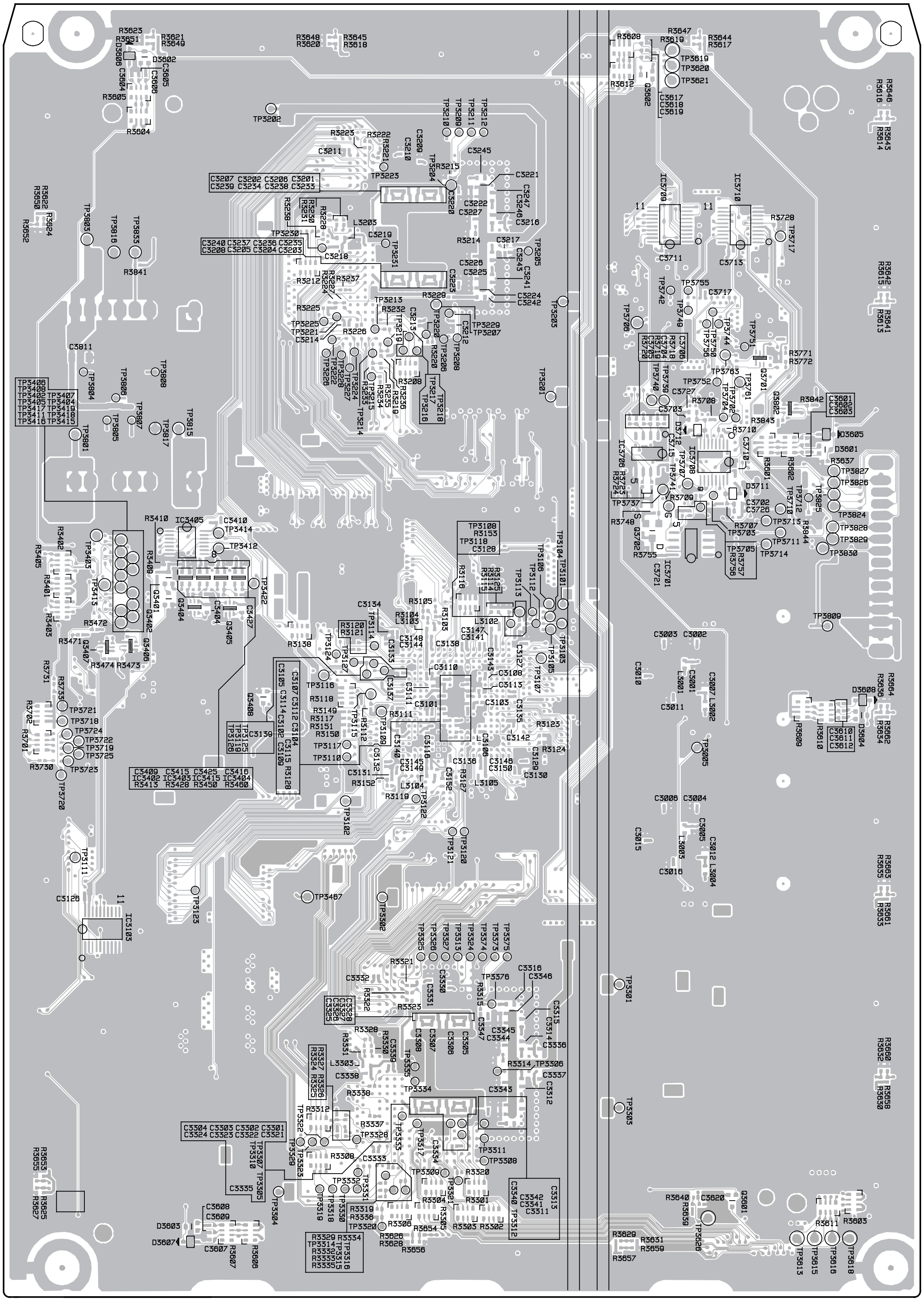


A
B
C
D
E
F
CN3603
CN3613
CN3604
CN3605
CN3602
CN3601
CN3612
CN3611
CN3610
CN3614
CN3609
CN3608
CN3607
CN3606
CN3701
CN3702
CN3703
CN3401
CN3501
CN3101
CN3001
CN3002
CN3801
IC3201
IC3101
IC3301
IC3410
IC3501
IC3001
IC3002
IC3409
IC3411
IC3701
IC3702
IC3703
IC3704
IC3705
IC3707
U3801
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
LF
DC
FC
FHD Digital Assy
AWW1115
AWV2290-
ANP2137-B
Pioneer
CN3701
1. GND_D
2. STB3.3V
3. BUSY
4. CNVSS
5. RXD1
6. TXD1
7. CLK1
8. RST
CN3101
1. DCLK
2. GND
3. CONF_DONE
4. nCONFIG
5. nCE
6. DATA
7. nCS
8. ASD
9. VCC
10. NC
11. NC
12. NC
13. UARTRXD
14. UARTTXD
15. GND
CN3703
1. STB3.3V
2. RE_DET
3. RXD_MD
4. TXD_MD
5. TXD_MD
6. GND_D
7. GND_D
CN3702
5. GND_D
4. TEMP1
3. E_SDA
2. E_SCL
1. EEP_3.3V
CN3401
1. TCK
2. GND
3. TDO
4. TDI
5. TMS
6. TRST
7. DBI
8. (CON_L)
9. +3.3V
10. RST
11. (CON_R)
12. NC
13. UARTRXD
14. UARTTXD
15. GND
CN3801
14. PD_TRG_B
13. PD_DET
12. DRF
11. RELAY
10. VSUS_ADJ
9. EXT_PD
8. GND_STB
7. NC
6. NC
5. NC
4. GND_D
3. GND_D
2. +12V
1. +12V

(ANP2137B)

FHD DIGITAL ASSY

SIDE B

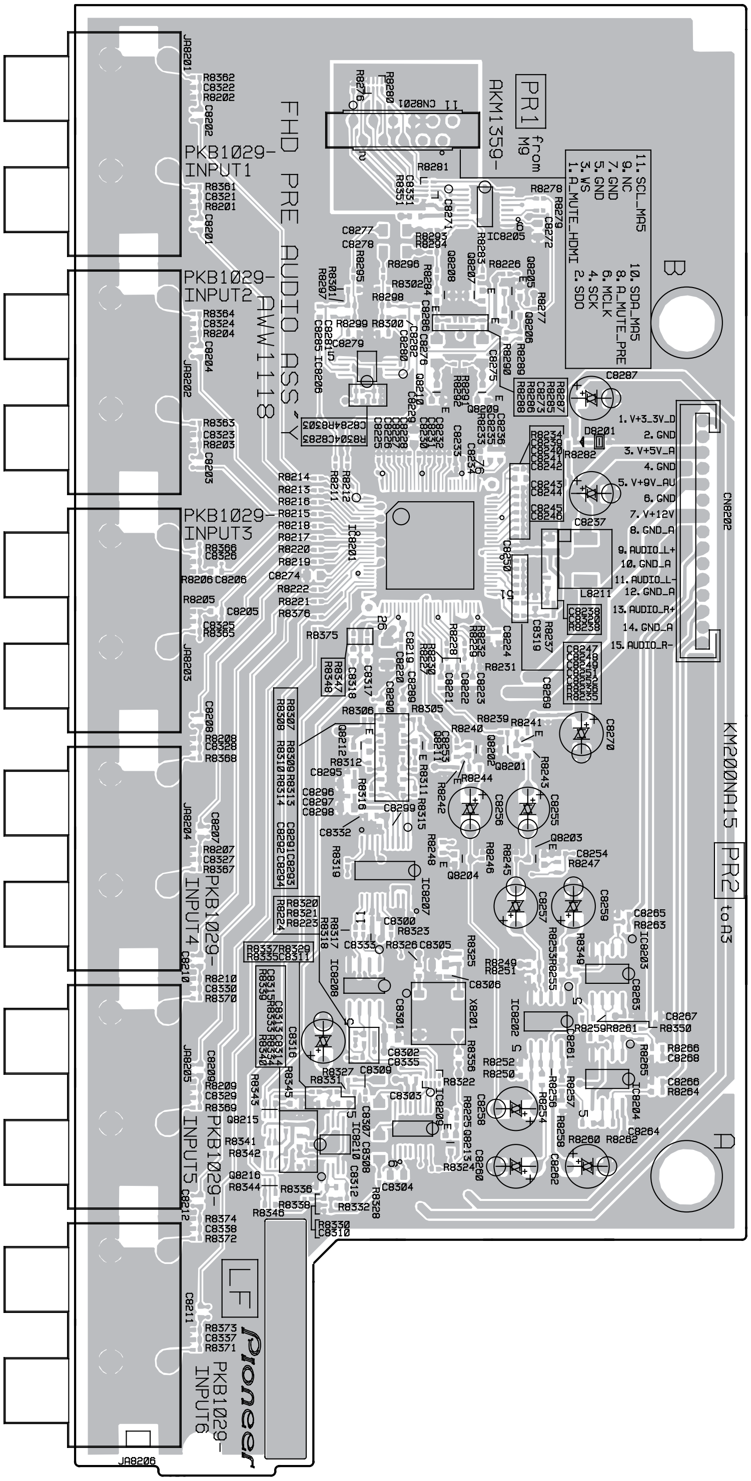

IC3709
IC3710
IC3405
IC3101
IC3706
IC3701
IC3708
C3207 C3202 C3206 C3201
C3239 C3234 C3238 C3233
C3240 C3237 C3236 C3235
C3208 C3205 C3204 C3203
C3409 C3415 C3425 C3416
IC3402 IC3403 IC3415 IC3404
R3413 R3428 R3450 R3460
C3304 C3303 C3302 C3301
C3324 C3323 C3322 C3321
TP3406 TP3408 TP3402 TP3407 TP3405 TP3404 TP3417 TP3419 TP3411 TP3418 TP3416 TP3415
TP3100 R3153 TP3118 C3128
R3329 R3334 TP3314 TP3316 R3332 TP3315 R3333 R3335

(ANP2137B)

2.8 FHD PRE AUDIO ASSY

FHD PRE AUDIO ASSY

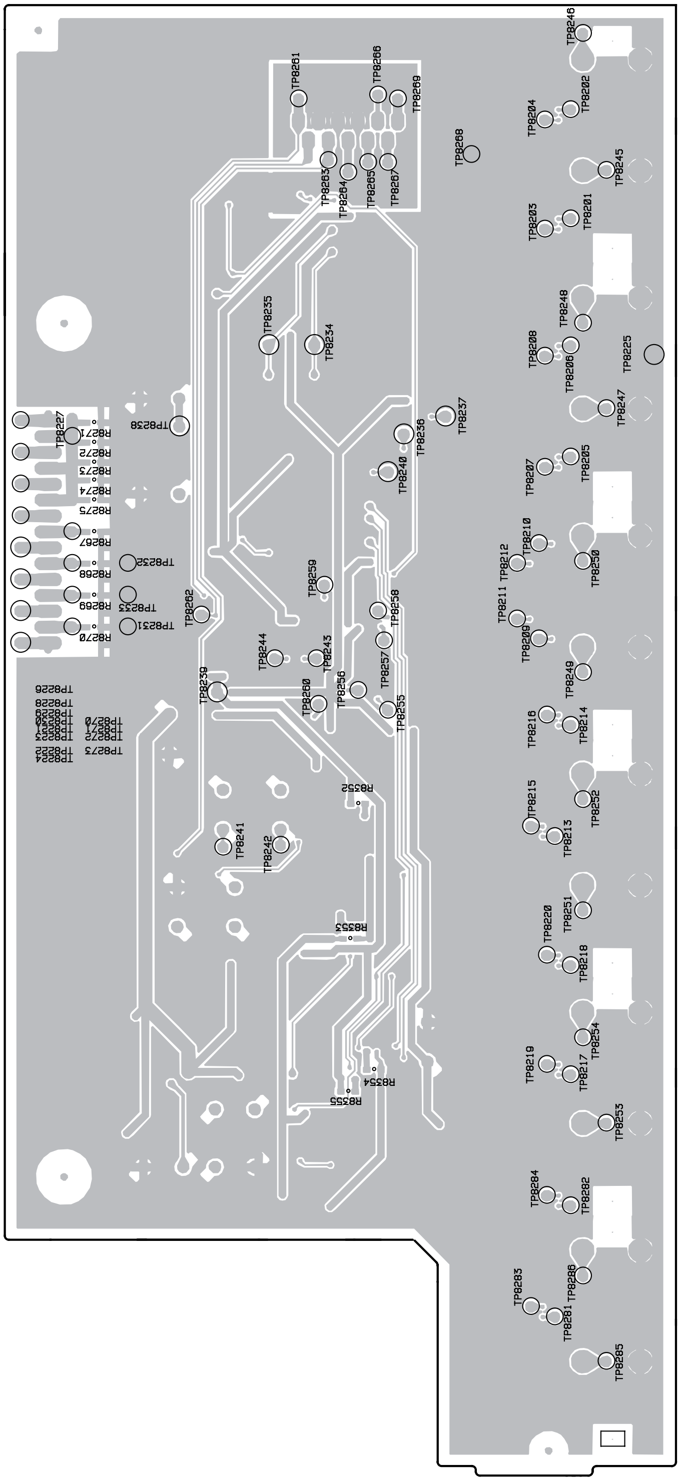
SIDE A


JA8201
PKB1029-INPUT1
PKB1029-INPUT2
JA8202
PKB1029-INPUT3
JA8203
PKB1029-INPUT4
JA8204
PKB1029-INPUT5
JA8205
PKB1029-INPUT6
JA8206
FHD PRE AUDIO ASSY
AWW1118
PR1 from M9
AKM1359-
CN8201
11. SCL_MA5
10. SDA_MA5
9. NC
8. A_MUTE_PRE
7. GND
6. MCLK
5. GND
4. SCK
3. WS
2. SDO
1. A_MUTE_HDMI
B
IC8201
IC8205
IC8206
IC8207
IC8208
IC8202
IC8203
IC8204
X8201
CN8202
1. V+3_3V_D
2. GND
3. V+5V_A
4. GND
5. V+9V_AU
6. GND
7. V+12V
8. GND_A
9. AUDIO_L+
10. GND_A
11. AUDIO_L-
12. GND_A
13. AUDIO_R+
14. GND_A
15. AUDIO_R-
KM200NA15
PR2 to A3
A
LF
Pioneer

(ANP2138B)

FHD PRE AUDIO ASSY

SIDE B

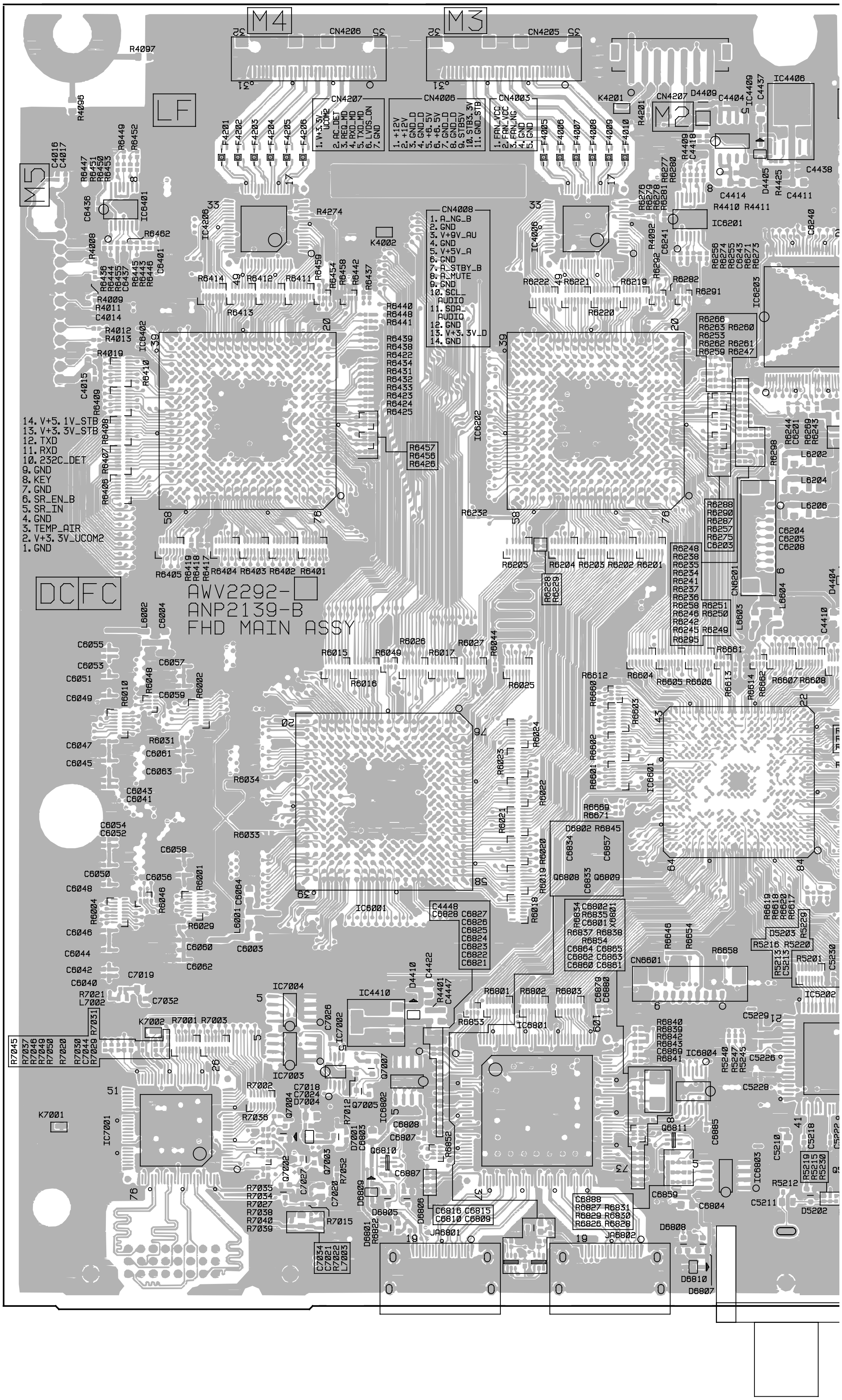

TP8246
TP8261
TP8266
TP8269
TP8204
TP8202
TP8268
TP8263
TP8264
TP8265
TP8267
TP8245
TP8203
TP8201
TP8248
TP8235
TP8234
TP8208
TP8206
TP8225
TP8247
TP8227
R8271
TP8238
TP8237
TP8236
R8272
R8273
R8274
TP8240
TP8207
TP8205
R8275
TP8210
TP8212
R8267
TP8232
TP8250
R8268
TP8259
TP8233
R8269
TP8262
TP8258
TP8211
TP8231
R8270
TP8209
TP8244
TP8243
TP8257
TP8249
TP8239
TP8256
TP8260
TP8255
TP8216
TP8214
TP8226
TP8228
TP8229
TP8230
TP8221
TP8223
TP8222
TP8224
TP8270
TP8271
TP8272
TP8273
R8352
TP8215
TP8252
TP8241
TP8242
TP8213
TP8220
TP8251
R8353
TP8218
TP8254
TP8219
TP8217
R8354
R8355
TP8253
TP8284
TP8282
TP8283
TP8286
TP8281
TP8285

(ANP2138B)

2.9 FHD MAIN ASSY

FHD MAIN ASSY

SIDE A


M4
CN4206
M3
CN4205
LF
CN4207
1. V+3.3V_UCOM2
2. AC_DET
3. REQ_MD
4. RXD_MD
5. TXD_MD
6. LVDS_ON
7. GND
CN4006
1. +12V
2. +12V
3. GND_D
4. GND_D
5. +6.5V
6. +6.5V
7. GND_D
8. GND_D
9. STB5V
10. STB3.3V
11. GND_STB
CN4003
1. FAN_VCC
2. FAN_VCC
3. FAN_NG
4. GND
5. GND
CN4207
M2
IC4406
M5
IC4206
IC4006
CN4008
1. A_NG_B
2. GND
3. V+6V_AU
4. GND
5. V+5V_A
6. GND
7. A_STBY_B
8. A_MUTE
9. GND
10. SCL_AUDIO
11. SDA_AUDIO
12. GND
13. V+3.3V_D
14. GND
14. V+5.1V_STB
13. V+3.3V_STB
12. TXD
11. RXD
10. 232C_DET
9. GND
8. KEY
7. GND
6. SR_EN_B
5. SR_IN
4. GND
3. TEMP_AIR
2. V+3.3V_UCOM2
1. GND
IC6202
IC6201
IC6203
CN6201
DC
FC
AWV2292-
ANP2139-B
FHD MAIN ASSY
IC6001
IC6601
CN6601
IC4410
IC7004
IC7003
IC7002
IC7001
IC6801
IC6802
IC6803
IC6804
IC5202
K7001
JA6801
JA6802

A

SIDE A

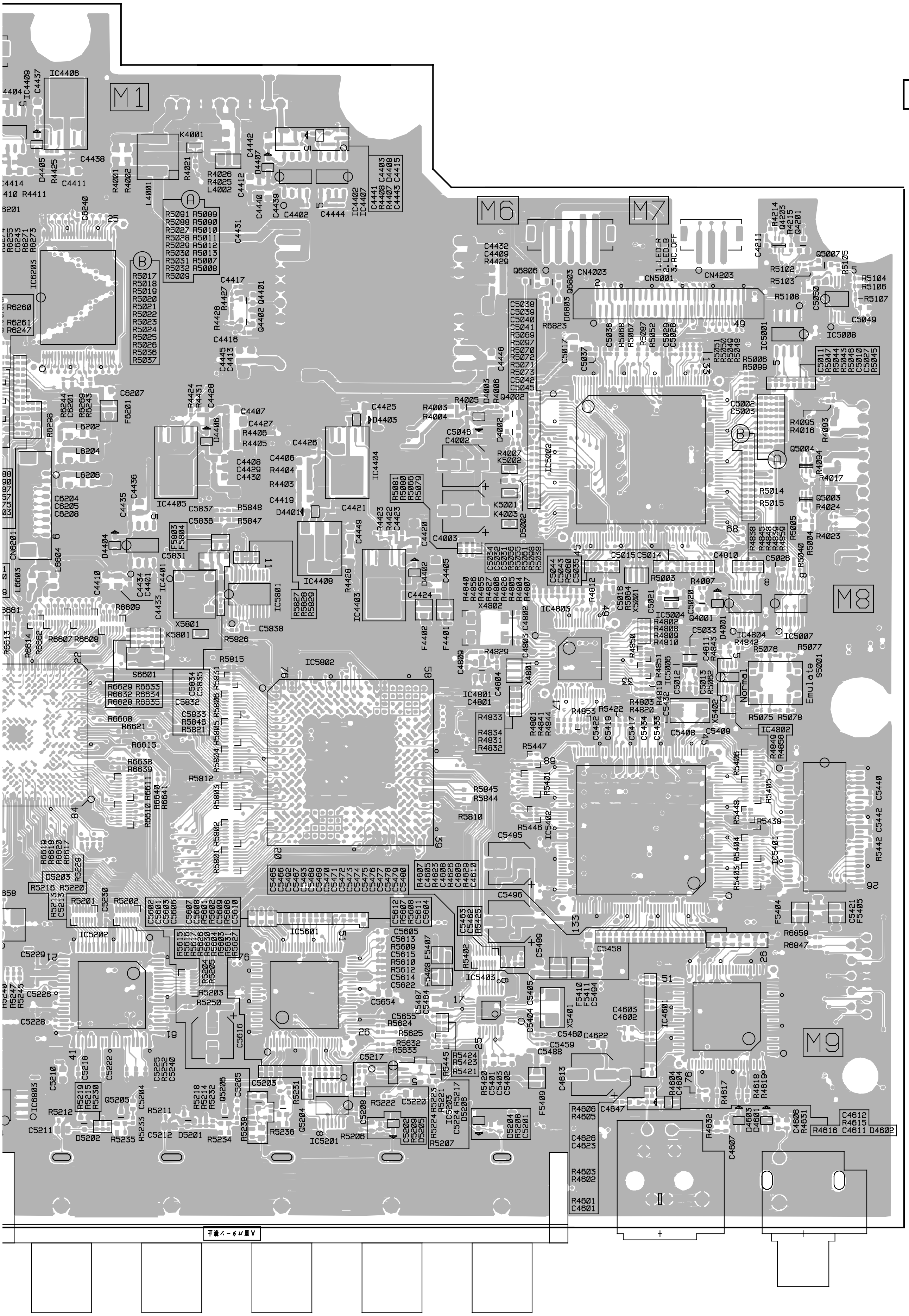
B

C

D

E

F


M1
M6
M7
M8
M9
IC4406
IC4405
IC4404
IC4408
IC4403
IC5802
IC5801
IC5001
IC5002
IC4803
IC5402
IC5401
IC5403
IC5601
IC5202
IC5201
IC4601
IC6203
CN4003
CN5001
CN4203
1.LED_R
2.LED_B
3.AC_OFF
Normal
Emulate
S5001
S6601
X5801
X5401
X5001
X4802

(ANP2139B)

FHD MAIN ASSY

SIDE B

A

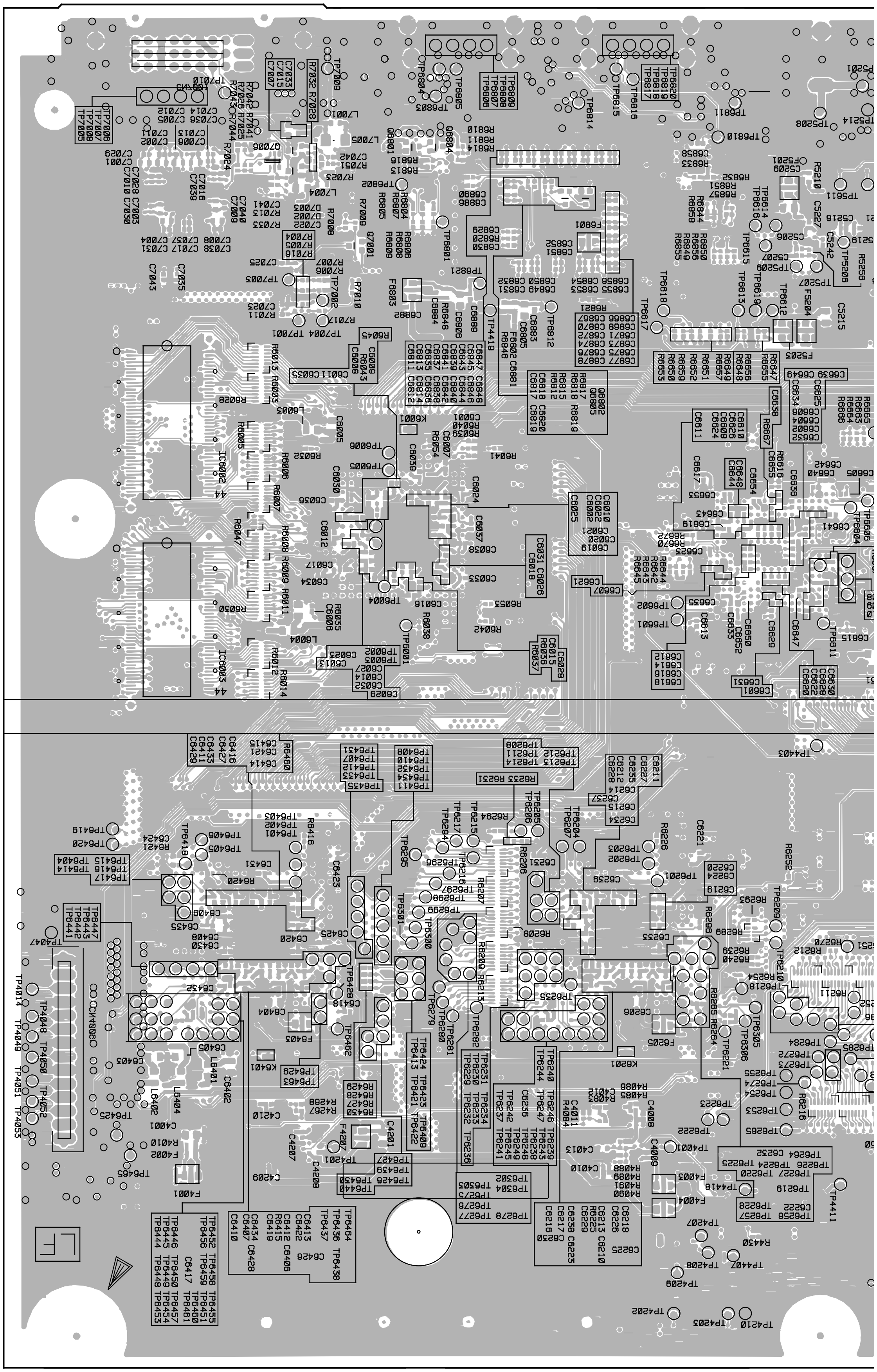
B

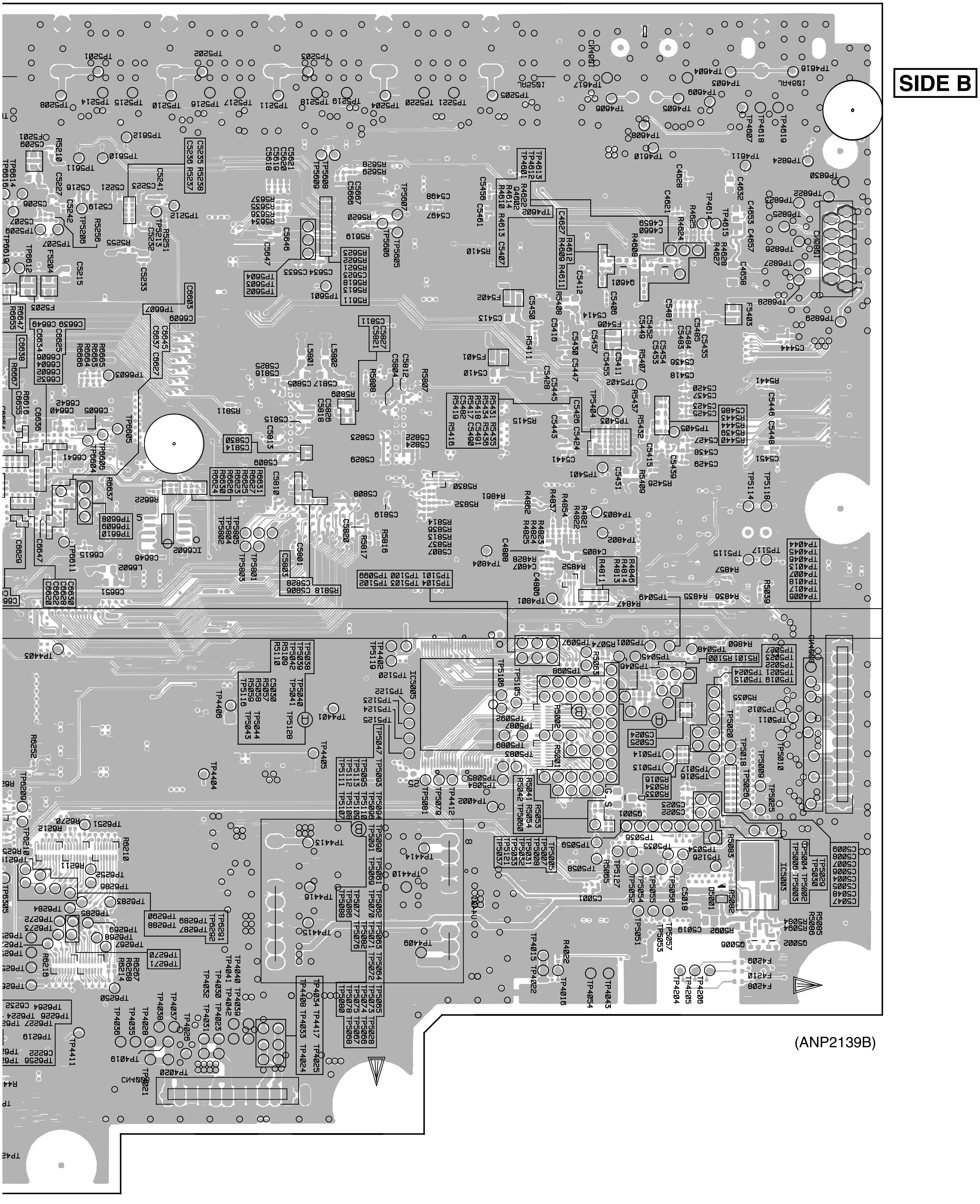
C

D

E

F



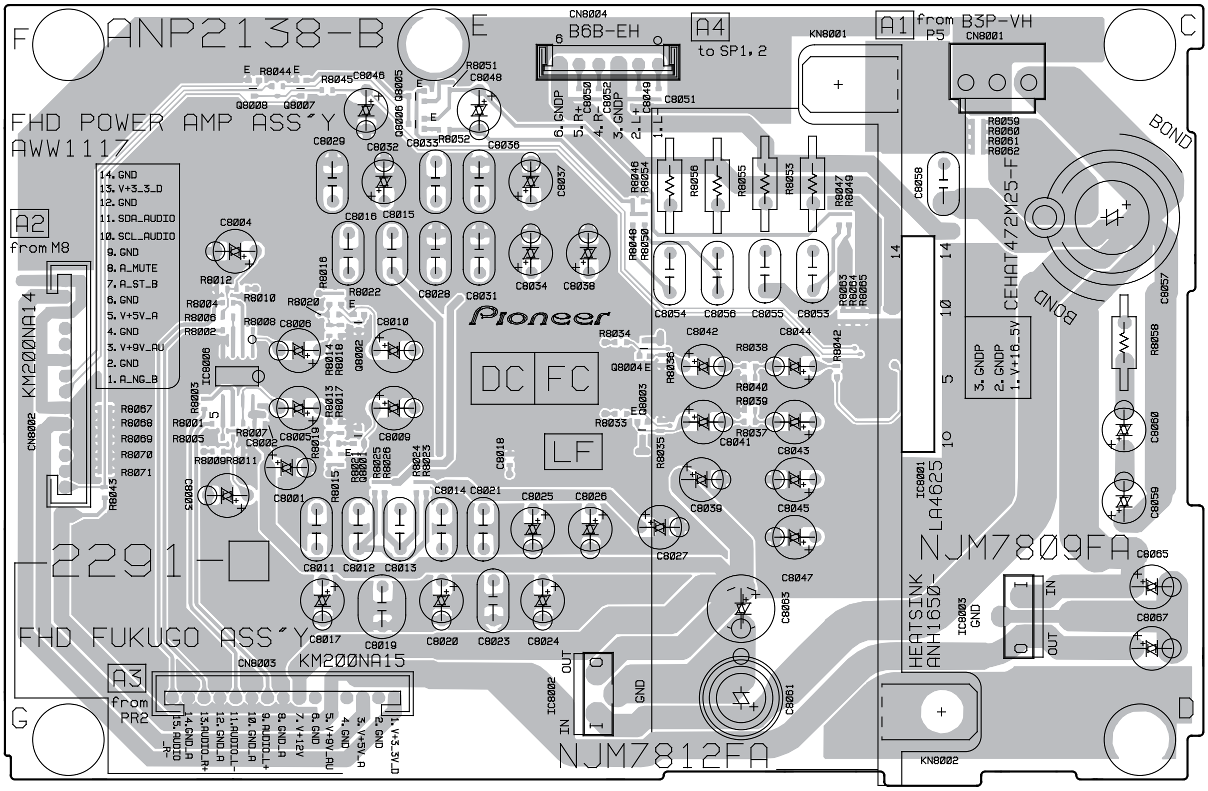

SIDE B
A
B
C
D
E
F

(ANP2139B)

2.10 FHD POWER AMP ASSY

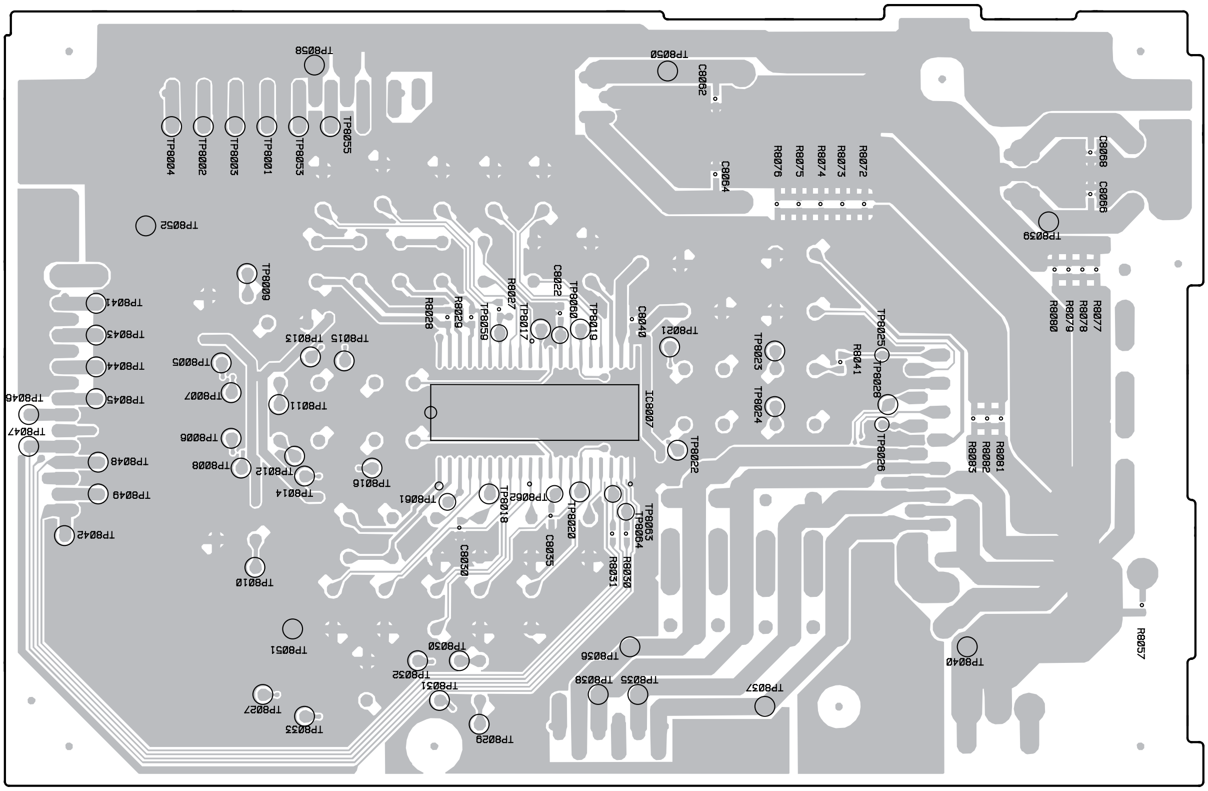
FHD POWER AMP ASSY

SIDE A


ANP2138-B
FHD POWER AMP ASS'Y
AWW1117
A2
from M8
KM200NA14
CN8002
14. GND
13. V+3_3_D
12. GND
11. SDA_AUDIO
10. SCL_AUDIO
9. GND
8. A_MUTE
7. A_ST_B
6. GND
5. V+5V_A
4. GND
3. V+9V_AU
2. GND
1. A_NG_B
CN8004
B6B-EH
A4
to SP1, 2
6. GNDP
5. R+
4. R-
3. GNDP
2. L+
1. L-
KN8001
A1
from B3P-VH
P5
CN8001
3. GNDP
2. GNDP
1. V+16.5V
CEHAT472M25-F
BOND
Pioneer
DC
FC
LF
IC8001
LA4625
NJM7809FA
HEATSINK
ANH1650-
IC8003
IN
GND
OUT
2291-
FHD FUKUGO ASS'Y
A3
from
PR2
CN8003
KM200NA15
1. V+3_3V_D
2. GND
3. V+5V_A
4. GND
5. V+9V_AU
6. GND
7. V+12V
8. GND_A
9. AUDIO_L+
10. GND_A
11. AUDIO_L-
12. GND_A
13. AUDIO_R+
14. GND_A
15. AUDIO_R-
IC8002
OUT
GND
IN
NJM7812FA
KN8002
E
F
G
C
D

FHD POWER AMP ASSY

SIDE B


IC8007
TP8058
TP8050
C8062
TP8004
TP8002
TP8003
TP8001
TP8053
TP8055
C8064
R8076
R8075
R8074
R8073
R8072
C8068
C8066
TP8052
TP8039
TP8009
R8080
R8079
R8078
R8077
TP8041
TP8043
TP8044
TP8045
TP8046
TP8047
TP8048
TP8049
TP8042
TP8010
TP8051
TP8040
R8057
TP8037
TP8029
TP8033
TP8027
R8081
R8082
R8083

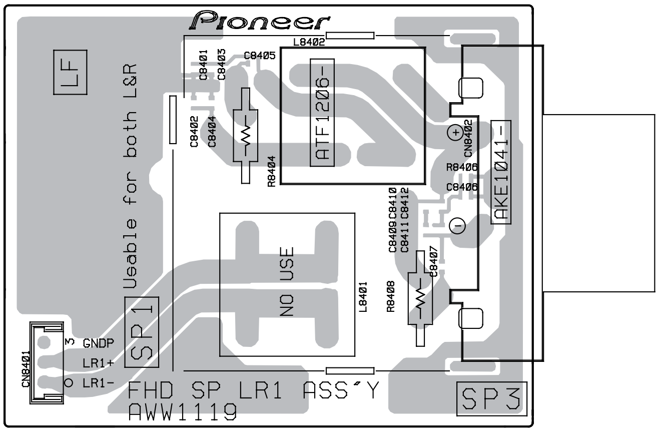
(ANP2138B)

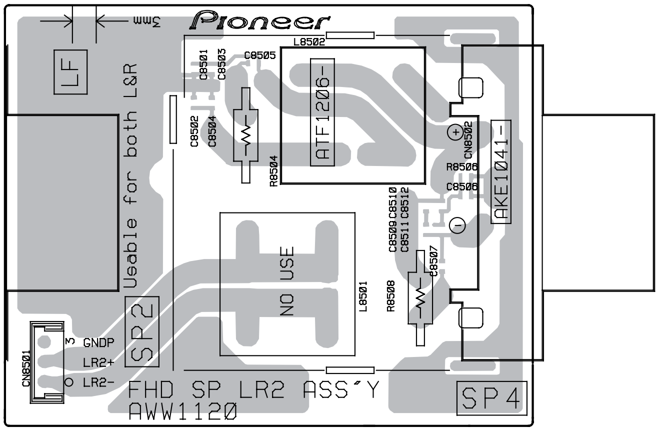
2.11 FHD SP LR1, FHD SP LR2 AND PANEL SENSOR ASSYS

FHD SP LR1 ASSY

FHD SP LR2 ASSY

SIDE A

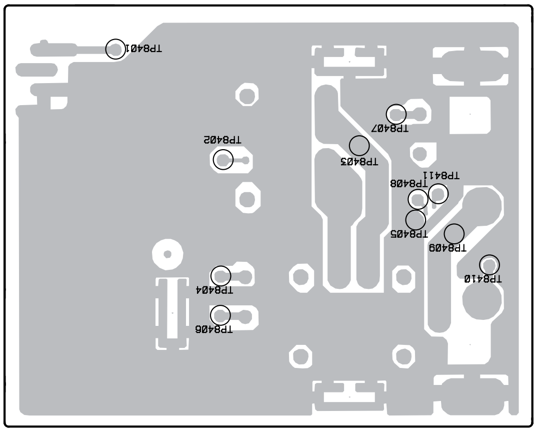

Pioneer
LF
Useable for both L&R
C8401
C8403
C8405
L8402
C8402
C8404
R8404
ATF1206-
CN8402
R8406
C8406
AKE1041-
C8409
C8410
C8411
C8412
C8407
NO USE
L8401
R8408
SP1
CN8401
GNDP
LR1+
LR1-
FHD SP LR1 ASS'Y
AWW1119
SP3

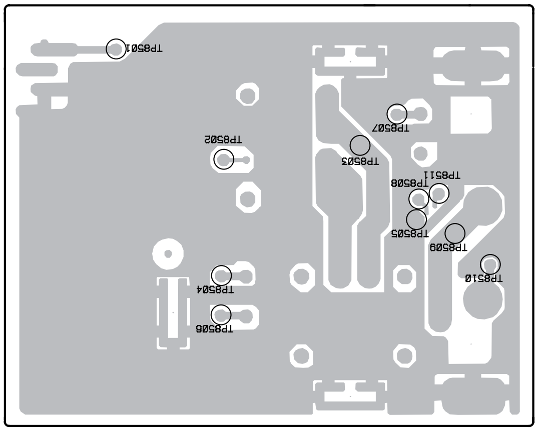

3mm
Pioneer
LF
Useable for both L&R
C8501
C8503
C8505
L8502
C8502
C8504
R8504
ATF1206-
CN8502
R8506
C8506
AKE1041-
C8509
C8510
C8511
C8512
C8507
NO USE
L8501
R8508
SP2
CN8501
GNDP
LR2+
LR2-
FHD SP LR2 ASS'Y
AWW1120
SP4

FHD SP LR1 ASSY

FHD SP LR2 ASSY

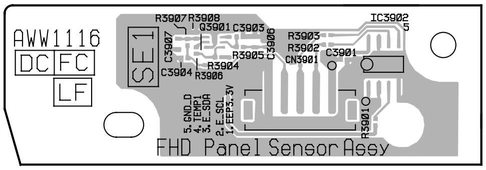
SIDE B


TP8401
TP8402
TP8407
TP8403
TP8411
TP8408
TP8405
TP8409
TP8410
TP8404
TP8406


TP8501
TP8502
TP8507
TP8503
TP8511
TP8508
TP8505
TP8509
TP8510
TP8504
TP8506

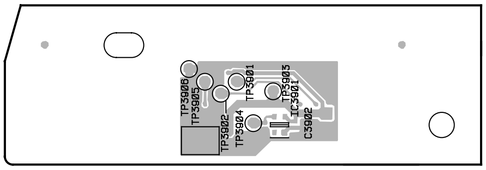
(ANP2138B)

PANEL SENSOR ASSY


AWW1116
DC
FC
LF
SE1
R3907
R3908
Q3901
C3903
C3907
C3906
R3903
R3902
IC3902
R3905
CN3901
C3901
C3904
R3904
R3906
5.GND_D
4.TEMP1
3.E.SDA
2.E.SCL
1.EEP3.5V
R3901
FHD Panel Sensor Assy

SIDE A

PANEL SENSOR ASSY


TP3906
TP3905
TP3901
TP3903
IC3901
TP3902
TP3904
C3902

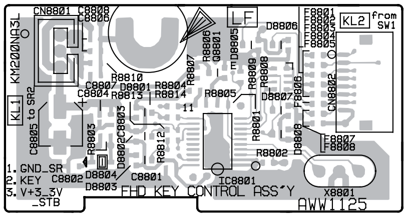
SIDE B

(ANP2137B)

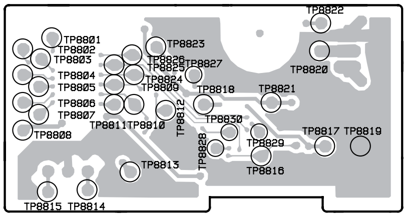
2.12 FHD KEY CONTROL, FHD LED, FHD FAN CONNECT AND FHD IR ASSYS

FHD KEY CONTROL ASSY

SIDE A

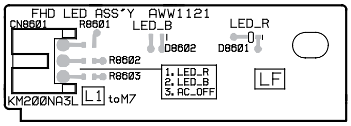

CN8801
KM200NA3L
KL1
to SR2
1. GND_SR
2. KEY
3. V+3_3V _STB
C8805
C8806
C8807
C8808
D8801
D8802
D8803
D8804
D8805
D8806
D8807
D8808
R8801
R8802
R8803
R8804
R8805
R8806
R8807
R8808
R8809
R8810
R8812
R8813
R8814
Q8801
C8801
C8802
C8803
C8804
IC8801
X8801
LF
KL2
from SW1
F8801
F8802
F8803
F8804
F8805
F8806
F8807
F8808
CN8802
FHD KEY CONTROL ASS'Y
AWW1125

SIDE B

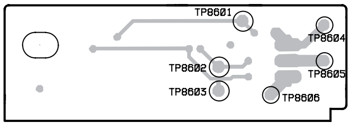

TP8801
TP8802
TP8803
TP8804
TP8805
TP8806
TP8807
TP8808
TP8809
TP8810
TP8811
TP8812
TP8813
TP8814
TP8815
TP8816
TP8817
TP8818
TP8819
TP8820
TP8821
TP8822
TP8823
TP8824
TP8825
TP8826
TP8827
TP8828
TP8829
TP8830

FHD LED ASSY

SIDE A

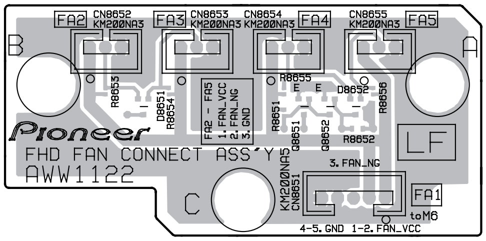

FHD LED ASS'Y AWW1121
CN8601
R8601
LED_B
LED_R
D8602
D8601
R8602
R8603
1. LED_R
2. LED_B
3. AC_OFF
LF
KM200NA3L
L1
toM7

SIDE B

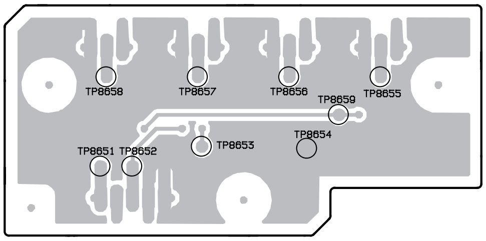

TP8601
TP8602
TP8603
TP8604
TP8605
TP8606

FHD FAN CONNECT ASSY

SIDE A

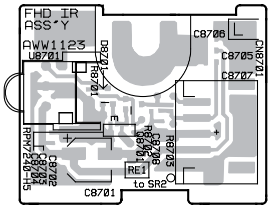

FA2
CN8652 KM200NA3
FA3
CN8653 KM200NA3
CN8654 KM200NA3
FA4
CN8655 KM200NA3
FA5
B
A
R8653
D8651
R8654
FA2 - FA5
1. FAN_VCC
2. FAN_NG
3. GND
R8655
E
E
D8652
R8651
Q8651
Q8652
R8656
R8652
LF
Pioneer
FHD FAN CONNECT ASS'Y
AWW1122
C
KM200NA5
CN8651
3. FAN_NG
FA1
toM6
4-5. GND
1-2. FAN_VCC

SIDE B

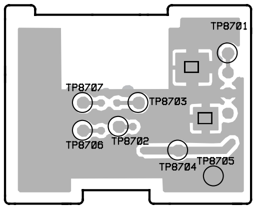

TP8658
TP8657
TP8656
TP8659
TP8655
TP8654
TP8651
TP8652
TP8653

FHD IR ASSY

SIDE A


FHD IR ASS'Y
AWW1123
U8701
D8701
R8701
C8706
L
CN8701
C8705
C8707
C8702
C8703
C8704
R8702
R8703
RPM7240-H5
RE1
to SR2
C8701

SIDE B

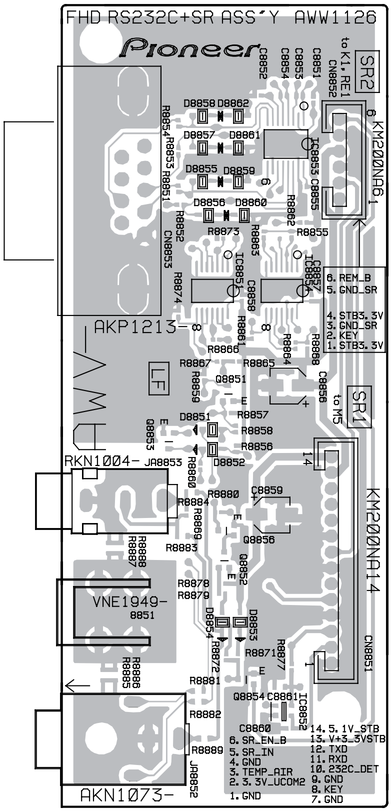

TP8701
TP8707
TP8703
TP8706
TP8702
TP8704
TP8705

(ANP2138B)

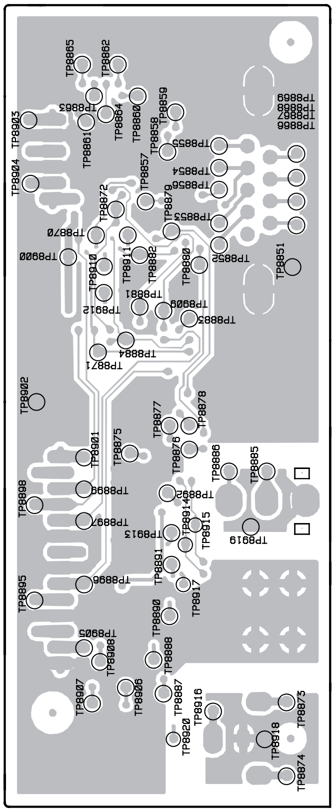
2.13 FHD RS 232C+SR AND FHD KEY ASSYS

FHD RS232C+SR ASSY

SIDE A

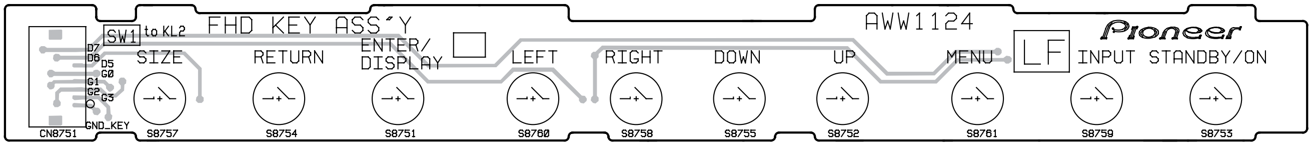

FHD RS232C+SR ASS'Y AWW1126
Pioneer
SR2
to K1, RE1
CN8852
KM200NA6
AKP1213-
LF
SR1
to M5
KM200NA14
CN8851
RKN1004-
JA8853
VNE1949-
8851
AKN1073-
JA8852
IC8851
IC8852
IC8853
Q8851
Q8852
Q8853
Q8854
Q8856
D8851
D8852
D8853
D8854
D8855
D8856
D8857
D8858
D8859
D8860
D8861
D8862
6. REM_B
5. GND_SR
4. STB3.3V
3. GND_SR
2. KEY
1. STB3.3V
14. 5.1V_STB
13. V+3.3VSTB
12. TXD
11. RXD
10. 232C_DET
9. GND
8. KEY
7. GND
6. SR_EN_B
5. SR_IN
4. GND
3. TEMP_AIR
2. 3.3V_UCOM2
1. GND

SIDE B


TP8851
TP8853
TP8854
TP8855
TP8856
TP8857
TP8858
TP8859
TP8860
TP8861
TP8862
TP8863
TP8864
TP8865
TP8866
TP8867
TP8868
TP8869
TP8870
TP8871
TP8872
TP8873
TP8874
TP8875
TP8876
TP8877
TP8878
TP8879
TP8880
TP8881
TP8882
TP8883
TP8884
TP8885
TP8886
TP8887
TP8888
TP8889
TP8890
TP8891
TP8892
TP8895
TP8896
TP8897
TP8898
TP8900
TP8901
TP8902
TP8903
TP8904
TP8905
TP8906
TP8907
TP8908
TP8909
TP8910
TP8911
TP8912
TP8913
TP8914
TP8915
TP8916
TP8917
TP8918
TP8919
TP8920

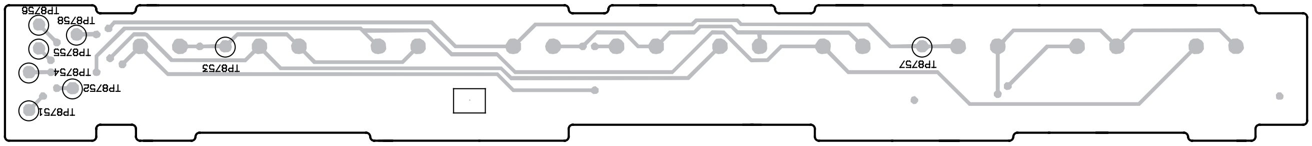
FHD KEY ASSY

SIDE A


SW1 to KL2
FHD KEY ASS'Y
AWW1124
Pioneer
LF
D7
D6
D5
G0
G1
G2
G3
GND_KEY
CN8751
SIZE
S8757
RETURN
S8754
ENTER/ DISPLAY
S8751
LEFT
S8760
RIGHT
S8758
DOWN
S8755
UP
S8752
MENU
S8761
INPUT
S8759
STANDBY/ON
S8753

FHD KEY ASSY

SIDE B


TP8756
TP8758
TP8755
TP8754
TP8752
TP8751
TP8753
TP8757

(ANP2138B)